

BRASS COPPER AND BRONZE

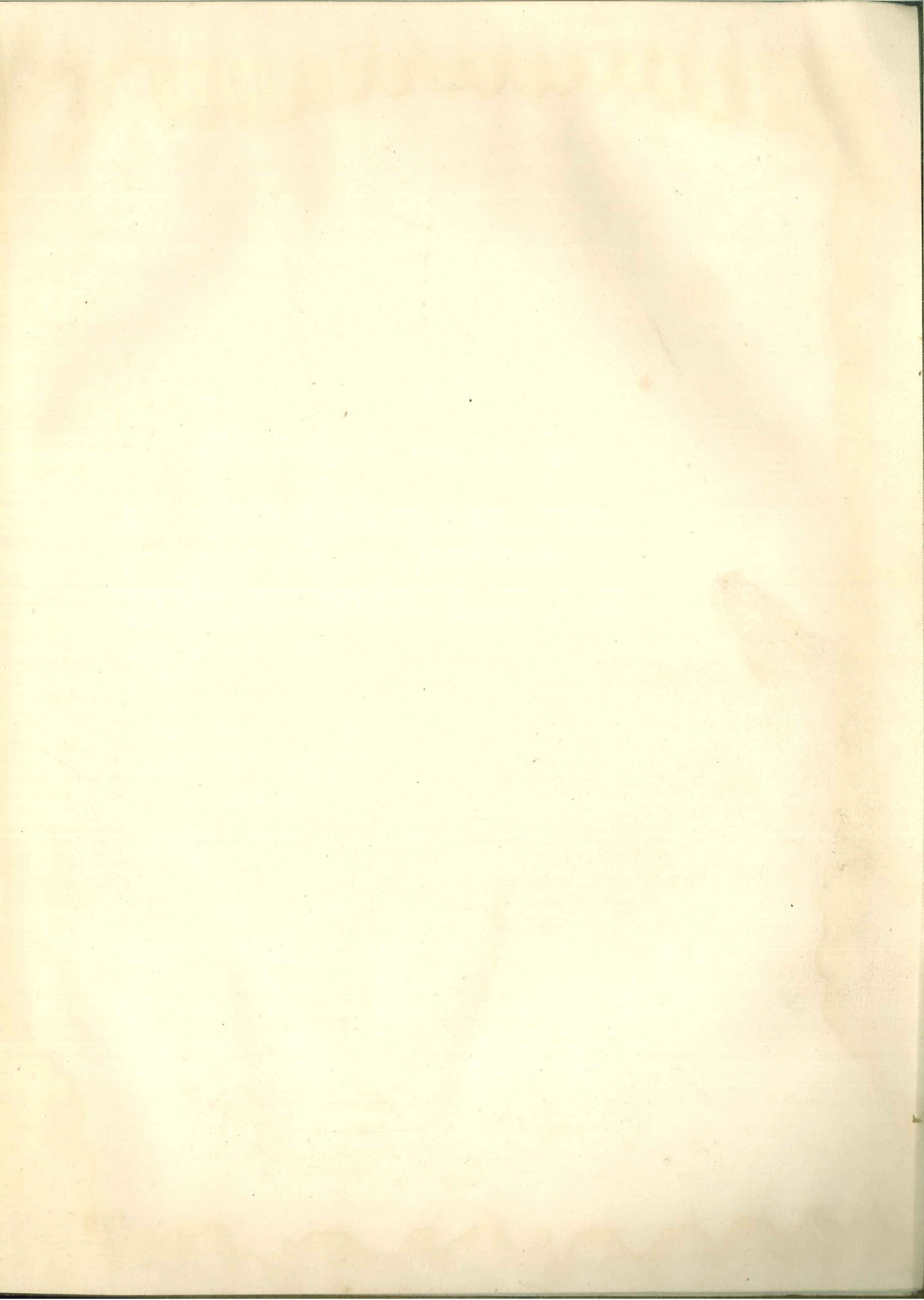
**SHEETS, TUBES, RODS,
WIRE, RIVETS, NAILS,
ETC., ETC.**

**IN STOCK
READY TO SHIP**



9TH EDITION

**U. T. HUNGERFORD
BRASS & COPPER CO.**



ORDERS AND INQUIRIES

GENERAL INFORMATION DESIRED

In meeting the varied requirements of metal consuming trades, so many different alloys, tempers and anneals must necessarily be used that it is not practicable to outline in a catalog the kind or quality best suited to any particular purpose.

Therefore, in addition to information regarding **thickness, width, length and temper**, which should invariably appear on each order or inquiry; the purpose for which material is to be used should also be clearly stated and when possible, sample should be submitted.

TOLERANCES

Metal furnished by us is rolled or drawn as close to indicated dimensions as is commercially practicable. All tolerances conform to those of the *American Society for Testing Materials*.

STANDARDS OF MEASUREMENT

On **Brass, Bronze, Copper** (note exception below) and **Nickel Silver** Sheets, Wire, Rod and Brazed Tube, **Brown & Sharpes** or American Gauge is the standard of measurement to which our "**Star Brand**" products are manufactured.

The thickness of Copper Sheets is ordinarily designated by weight in ounces or pounds to the square foot. Conversion tables for working out thicknesses of any type of material according to standards other than above, will be found in the back section of this book.

Long custom has made **Stubs** or Birmingham Gauge the standard on **Seamless Brass, Bronze and Copper Tubes** and unless otherwise specified, gauge numbers as applied to the wall thickness of Seamless Tubes will be interpreted according to that standard.

MEASURING DIAMETER OF TUBES

When ordering either **Seamless** or **Brazed Tubes** it should be clearly stated whether the diameter given is "**inside**" or "**outside**."

ANNEALS AND TEMPERS

The character of either the Anneal or the Temper desired should always be specified.

The tempers ordinarily furnished for **Sheet Brass** are "**half hard**," "**hard**" and "**spring**."

Wire, Rods, Seamless and Brazed Tubes are usually furnished "**commercially hard**" unless otherwise ordered, **except for the following**.

Our "**Star Brand**" **I. P. S. Seamless Brass Plumbing Pipe** is ordinarily furnished just sufficiently **annealed** to prevent cracking and make it suitable for plumbing and steamfitting work.

Seamless Pipe and Tube that is to be **bent, coiled or flanged** should be so **specified on the order**.

"**Star Brand**" **I. P. S. Seamless Copper Pipe** can be furnished from stock or mill in either "**commercially hard**" or "**soft**" temper.

STANDARD LENGTHS

Lengths of standard stock items are clearly designated on the following pages of this catalog.

CUTTING TO EXACT LENGTHS

Material ordered cut to **uniform specific lengths** will be subject to an **extra charge**; except that when the length specified is 2 feet or over, **no charge** will be made for cutting provided, either of the following phrases is added, viz.:

"With end pieces included"

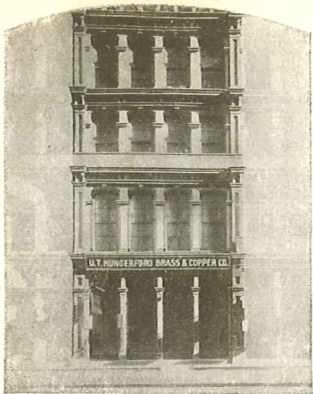
"With random lengths included"

An additional charge will be made for sheet metal cut to lengths of less than 2 feet; except when the following phrase is added, viz.:

"Or cut to any multiple thereof"

FACILITIES FOR CUTTING STOCK MATERIAL

We have unexcelled facilities for cutting, sawing or slitting stock material to any required size which enables us to furnish **special** sizes almost as promptly as standard stock items.



Philadelphia



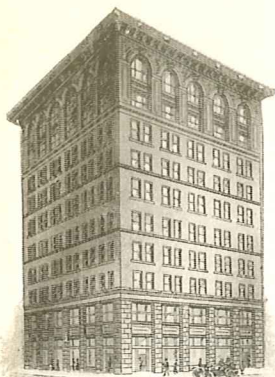
Baltimore



Cleveland



New York



San Francisco



St. Louis

Warehouses



New York



Boston



New York

U.T. HUNGERFORD BRASS & COPPER CO.

U.T.HUNGERFORD



BRASS & COPPER Co.

NEW YORK CITY

Main Offices and Warehouses
HUNGERFORD BUILDINGS
Lafayette, White and Franklin Streets

BOSTON, MASS.

411-429 D Street

BALTIMORE, MD.

Lombard and South Streets

PHILADELPHIA, PA.

Office: 510 Arch Street
Store and Stock Department: 17 North 7th Street

PITTSBURGH, PA.

927 Park Building

CLEVELAND, OHIO

3035 St. Clair Avenue

ST. LOUIS, MO.

312-314 North Second Street

SAN FRANCISCO, CAL.

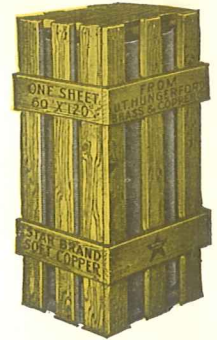
22 Battery Street

SCREEN CLOTH MILL
HUNGERFORD, YORK COUNTY, PA.

U.T.HUNGERFORD



BRASS & COPPER CO.



STAR ★ BRAND

SHEET COPPER

The Following Sizes are Carried in our Warehouse Stock Ready for Immediate Shipment

COLD ROLLED PATENT LEVELED

CORNICE COPPER IN FLAT SHEETS

Size of Sheet in Inches	Weight in Ounces to Sq. Ft.	Nearest Equiv. B. & S. Ga.	Approx. Total Weight of Sheet
14"x48"	14 oz.	No. 25	4.083 lbs.
14"x48"	16 oz.	No. 23	4.667 lbs.
20"x96"	14 oz.	No. 25	11.667 lbs.
20"x96"	16 oz.	No. 23	13.333 lbs.
24"x48"	14 oz.	No. 25	7.000 lbs.
24"x48"	16 oz.	No. 23	8.000 lbs.
24"x96"	14 oz.	No. 25	14.000 lbs.
24"x96"	16 oz.	No. 23	16.000 lbs.
24"x96"	18 oz.	No. 22	18.000 lbs.
24"x96"	20 oz.	No. 21	20.000 lbs.
26"x96"	14 oz.	No. 25	15.167 lbs.
26"x96"	16 oz.	No. 23	17.333 lbs.
28"x96"	14 oz.	No. 25	16.333 lbs.
28"x96"	16 oz.	No. 23	18.667 lbs.
30"x60"	12 oz.	No. 26	9.375 lbs.
30"x60"	14 oz.	No. 25	10.938 lbs.
30"x60"	16 oz.	No. 23	12.500 lbs.
30"x60"	18 oz.	No. 22	14.063 lbs.
30"x60"	20 oz.	No. 21	15.625 lbs.
30"x60"	24 oz.	No. 20	18.750 lbs.
30"x96"	14 oz.	No. 25	17.500 lbs.
30"x96"	16 oz.	No. 23	20.000 lbs.
30"x96"	18 oz.	No. 22	22.500 lbs.
30"x96"	20 oz.	No. 21	25.000 lbs.
30"x96"	24 oz.	No. 20	30.000 lbs.
30"x96"	†32 oz.	No. 17	40.000 lbs.
32"x96"	16 oz.	No. 23	21.333 lbs.
34"x96"	16 oz.	No. 23	22.667 lbs.
36"x96"	14 oz.	No. 25	21.000 lbs.
36"x96"	16 oz.	No. 23	24.000 lbs.
36"x96"	18 oz.	No. 22	27.000 lbs.
36"x96"	20 oz.	No. 21	30.000 lbs.
36"x96"	24 oz.	No. 20	36.000 lbs.
36"x96"	†28 oz.	No. 19	42.000 lbs.
36"x96"	32 oz.	No. 17	48.000 lbs.
36"x120"	16 oz.	No. 23	30.000 lbs.

SOFT PLAIN

ROLL COPPER

IN ROLLS OF ABOUT 75 POUNDS
For Roof Flashings, Also Spinning, Etc.

Width in Inches	Weight in Ounces to Sq. Ft.	Approx. Weight Per Lin. Ft.	Approx. Total Length of Roll
7"	16 oz.	.583 lbs.	128 ft.
10"	†14 oz.	.729 lbs.	78 ft.
10"	16 oz.	.833 lbs.	90 ft.
12"	14 oz.	.875 lbs.	86 ft.
12"	16 oz.	1.000 lbs.	75 ft.
14"	10 oz.	.729 lbs.	103 ft.
14"	12 oz.	.875 lbs.	96 ft.
14"	14 oz.	1.021 lbs.	74 ft.
14"	16 oz.	1.167 lbs.	65 ft.
14"	18 oz.	1.313 lbs.	57 ft.
14"	20 oz.	1.458 lbs.	51 ft.
14"	24 oz.	1.750 lbs.	43 ft.
20"	16 oz.	1.667 lbs.	45 ft.

COLD ROLLED PATENT LEVELED
TINNED COPPER

IN FLAT SHEETS
Tinned One Side. Not Polished

Size of Sheet in Inches	Weight in Ounces to Sq. Ft.	Nearest Equiv. B. & S. Ga.	Approx. Total Weight of Sheet
14"x48"	14 oz.	No. 25	4.083 lbs.
14"x48"	16 oz.	No. 23	4.667 lbs.
14"x60"	14 oz.	No. 25	5.104 lbs.
14"x60"	16 oz.	No. 23	5.833 lbs.
24"x48"	14 oz.	No. 25	7.000 lbs.
24"x48"	16 oz.	No. 23	8.000 lbs.
24"x48"	18 oz.	No. 22	9.000 lbs.
24"x60"	14 oz.	No. 25	8.750 lbs.
24"x60"	16 oz.	No. 23	10.000 lbs.
24"x60"	18 oz.	No. 22	11.000 lbs.
24"x96"	16 oz.	No. 23	16.000 lbs.
30"x60"	14 oz.	No. 25	10.938 lbs.
30"x60"	16 oz.	No. 23	12.500 lbs.
30"x60"	18 oz.	No. 22	14.063 lbs.
30"x60"	20 oz.	No. 21	15.625 lbs.
30"x60"	24 oz.	No. 20	18.750 lbs.
30"x96"	14 oz.	No. 25	17.500 lbs.
30"x96"	16 oz.	No. 23	20.000 lbs.
30"x96"	18 oz.	No. 22	22.500 lbs.
30"x96"	20 oz.	No. 21	25.000 lbs.
30"x96"	24 oz.	No. 20	30.000 lbs.
30"x96"	28 oz.	No. 19	35.000 lbs.
30"x96"	32 oz.	No. 17	40.000 lbs.
36"x96"	*14 oz.	No. 25	21.000 lbs.
36"x96"	16 oz.	No. 23	24.000 lbs.
36"x96"	18 oz.	No. 22	27.000 lbs.
36"x96"	20 oz.	No. 21	30.000 lbs.
36"x96"	24 oz.	No. 20	36.000 lbs.
36"x96"	28 oz.	No. 19	42.000 lbs.
36"x96"	32 oz.	No. 17	48.000 lbs.

COLD ROLLED "UTILITY"

STRIP COPPER IN FLAT STRIPS

Edges Straight and Parallel for Roofing Work.

Size of Strip in Inches	Weight in Ounces to Sq. Ft.	Nearest Equiv. B. & S. Ga.	Approx. Total Weight of Strip
8½"x120"	16 oz.	No. 23	7.083 lbs.
10" x 96"	16 oz.	No. 23	6.667 lbs.
10" x 120"	16 oz.	No. 23	8.333 lbs.
11¼"x120"	16 oz.	No. 23	9.792 lbs.
12" x 96"	16 oz.	No. 23	8.000 lbs.
13" x 96"	16 oz.	No. 23	8.667 lbs.
14" x 96"	16 oz.	No. 23	9.333 lbs.
15" x 96"	16 oz.	No. 23	10.000 lbs.

LEAD COATED

ROOFING COPPER IN FLAT SHEETS SOFT AND COLD ROLLED

Same Sizes in Both Tempers, Coated One Side

Size of Sheet in Inches	Approx. Weight in Ounces to Sq. Ft. After Coating	Nearest Equiv. B. & S. Ga.	Approx. Total Weight of Sheet
24"x96"	18 oz.	No. 23	18 lbs.
30"x96"	18 oz.	No. 23	22.5 lbs.
36"x96"	18 oz.	No. 23	27 lbs.

COLD ROLLED PATENT LEVELED
TINNED COPPER

IN FLAT SHEETS
Tinned One Side. Polished Both Sides

Size of Sheet in Inches	Weight in Ounces to Sq. Ft.	Nearest Equiv. B. & S. Ga.	Approx. Total Weight of Sheet
14"x58½"	*14 oz.	No. 25	4.977 lbs.
24"x48"	16 oz.	No. 23	8.000 lbs.
24"x48"	20 oz.	No. 21	10.000 lbs.
30"x60"	14 oz.	No. 25	10.938 lbs.
30"x60"	16 oz.	No. 23	12.500 lbs.
30"x60"	20 oz.	No. 21	15.625 lbs.
30"x96"	14 oz.	No. 25	17.500 lbs.
30"x96"	16 oz.	No. 23	20.000 lbs.
30"x96"	20 oz.	No. 21	25.000 lbs.
30"x96"	24 oz.	No. 20	30.000 lbs.

COLD ROLLED CRIMPED COPPER

Crimped Across Width of Sheet

In Addition to the Following, Any Stock Size of C. R. Copper Can be Crimped Promptly.

Size of Sheet Before Crimping	Size of Sheet After Crimping	Weight in Ounces to Sq. Ft.	Approx. Total Weight of Sheet
30"x96"	30"x94½"	16 oz.	20.000 lbs.
36"x96"	36"x94½"	16 oz.	24.000 lbs.

* Carried only in our Boston Stock

† Carried only in our Cleveland Stock.

‡ Carried only in our Philadelphia Stock.

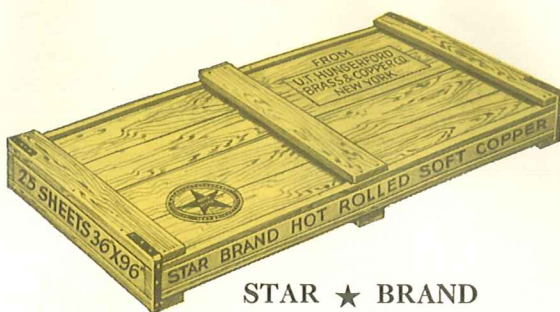
‡ Carried only in our Philadelphia Stock.

* Carried only in our Boston Stock.

U.T.HUNGERFORD



BRASS & COPPER CO.



STAR ★ BRAND

SHEET COPPER

The Following Sizes are Carried in our Warehouse Stock Ready for Immediate Shipment

HOT ROLLED PLAIN SOFT COPPER IN FLAT SHEETS

Size of Sheet in Inches	Weight in Ounces to Sq. Ft.	Nearest Equiv. B. & S. Ga.	Approx. Total Weight of Sheet
14"x48"	12 oz.	No. 26	3.500 lbs.
14"x48"	14 oz.	No. 25	4.083 lbs.
14"x48"	16 oz.	No. 23	4.667 lbs.
14"x48"	18 oz.	No. 22	5.250 lbs.
16"x96"	*16 oz.	No. 23	10.667 lbs.
18"x96"	*14 oz.	No. 25	10.500 lbs.
18"x96"	*16 oz.	No. 23	12.000 lbs.
20"x96"	14 oz.	No. 25	11.667 lbs.
20"x96"	16 oz.	No. 23	13.333 lbs.
22"x96"	*14 oz.	No. 25	12.833 lbs.
22"x96"	*16 oz.	No. 23	14.667 lbs.
24"x48"	12 oz.	No. 26	6.000 lbs.
24"x48"	14 oz.	No. 25	7.000 lbs.
24"x48"	16 oz.	No. 23	8.000 lbs.
24"x48"	18 oz.	No. 22	9.000 lbs.
24"x96"	14 oz.	No. 25	14.000 lbs.
24"x96"	16 oz.	No. 23	16.000 lbs.
24"x96"	18 oz.	No. 22	18.000 lbs.
26"x96"	†14 oz.	No. 25	15.167 lbs.
26"x96"	16 oz.	No. 23	17.333 lbs.
26"x96"	18 oz.	No. 22	19.667 lbs.
28"x96"	16 oz.	No. 23	18.667 lbs.
30"x60"	12 oz.	No. 26	9.375 lbs.
30"x60"	14 oz.	No. 25	10.938 lbs.
30"x60"	16 oz.	No. 23	12.500 lbs.
30"x60"	18 oz.	No. 22	14.063 lbs.
30"x60"	20 oz.	No. 21	15.625 lbs.
30"x60"	24 oz.	No. 20	18.750 lbs.
30"x120"	*16 oz.	No. 23	25.000 lbs.
32"x96"	16 oz.	No. 23	21.333 lbs.
34"x96"	*16 oz.	No. 23	22.667 lbs.
36"x72"	14 oz.	No. 25	15.750 lbs.
36"x72"	16 oz.	No. 23	18.000 lbs.
36"x72"	24 oz.	No. 20	27.000 lbs.
36"x96"	14 oz.	No. 25	21.000 lbs.
36"x96"	16 oz.	No. 23	24.000 lbs.
36"x96"	18 oz.	No. 22	27.000 lbs.
36"x96"	20 oz.	No. 21	30.000 lbs.
36"x96"	24 oz.	No. 20	36.000 lbs.
36"x120"	*16 oz.	No. 23	30.000 lbs.
48"x72"	14 oz.	No. 25	21.000 lbs.
48"x72"	16 oz.	No. 23	24.000 lbs.
48"x72"	18 oz.	No. 22	27.000 lbs.
48"x72"	20 oz.	No. 21	30.000 lbs.
48"x72"	24 oz.	No. 20	36.000 lbs.

HOT ROLLED PLAIN BRAZIERS' COPPER IN FLAT SHEETS For Coppersmith Work

Size of Sheet in Inches	Weight in Pounds to Sq. Ft.	Nearest Equiv. B. & S. Ga.	Approx. Total Weight of Sheets
30"x60"	1 1/4 lbs.	No. 20	18.750 lbs.
30"x60"	1 1/2 lbs.	No. 20	20.313 lbs.
30"x60"	1 3/4 lbs.	No. 19	21.875 lbs.
30"x60"	2 lbs.	No. 17	25.000 lbs.
30"x60"	2 1/4 lbs.	No. 15	31.250 lbs.
30"x60"	2 1/2 lbs.	No. 14	35.938 lbs.
30"x60"	3 lbs.	No. 14	37.500 lbs.
30"x60"	3 1/4 lbs.	No. 13	40.625 lbs.
30"x60"	3 1/2 lbs.	No. 13	43.750 lbs.
30"x60"	4 lbs.	No. 11	50.000 lbs.
30"x60"	4 3/4 lbs.	No. 10	59.375 lbs.
30"x60"	5 lbs.	No. 10	62.500 lbs.
30"x60"	6 lbs.	No. 8	75.000 lbs.
30"x60"	*6 1/4 lbs.	No. 7	80.000 lbs.
36"x72"	1 1/2 lbs.	No. 20	27.000 lbs.
36"x72"	3 lbs.	No. 14	54.000 lbs.
36"x72"	4 lbs.	No. 11	72.000 lbs.
36"x72"	6 lbs.	No. 8	108.000 lbs.
48"x72"	1 1/2 lbs.	No. 20	36.000 lbs.
48"x72"	1 3/4 lbs.	No. 19	42.000 lbs.
48"x72"	2 1/2 lbs.	No. 17	48.000 lbs.
48"x72"	3 lbs.	No. 15	60.000 lbs.
48"x72"	3 1/2 lbs.	No. 14	72.000 lbs.
48"x72"	4 lbs.	No. 13	84.000 lbs.
48"x72"	4 1/2 lbs.	No. 11	96.000 lbs.
48"x72"	5 lbs.	No. 10	108.000 lbs.
48"x72"	5 1/2 lbs.	No. 9	132.000 lbs.
48"x72"	6 lbs.	No. 8	144.000 lbs.
48"x72"	7 lbs.	No. 7	168.000 lbs.
48"x72"	7 1/2 lbs.	No. 6	180.000 lbs.
48"x72"	8 lbs.	No. 5	192.000 lbs.
48"x72"	9 lbs.	No. 4	216.000 lbs.
48"x72"	12 lbs.	No. 2	288.000 lbs.
48"x96"	†2 lbs.	No. 17	64.000 lbs.
48"x96"	†2 1/2 lbs.	No. 15	80.000 lbs.
48"x96"	†3 lbs.	No. 14	96.000 lbs.
48"x120"	2 lbs.	No. 17	80.000 lbs.
48"x120"	2 1/2 lbs.	No. 15	100.000 lbs.
48"x120"	3 lbs.	No. 14	120.000 lbs.
60"x120"	*1 1/2 lbs.	No. 20	75.000 lbs.
60"x120"	*2 lbs.	No. 17	100.000 lbs.
60"x120"	†3 1/2 lbs.	No. 14	150.000 lbs.
60"x120"	4 lbs.	No. 13	175.000 lbs.
60"x120"	4 1/2 lbs.	No. 11	200.000 lbs.
60"x120"	5 lbs.	No. 10	225.000 lbs.
60"x120"	5 1/2 lbs.	No. 8	300.000 lbs.
72"x120"	*3 lbs.	No. 14	180.000 lbs.
72"x120"	*4 lbs.	No. 11	240.000 lbs.
72"x120"	*5 lbs.	No. 10	300.000 lbs.
72"x120"	*6 lbs.	No. 8	360.000 lbs.
72"x144"	*4 lbs.	No. 11	288.000 lbs.
72"x144"	*5 lbs.	No. 10	360.000 lbs.
72"x144"	*6 lbs.	No. 8	432.000 lbs.

* Carried only in our Boston Stock.

† Carried only in our Philadelphia Stock.

FOR COPPERSMITHS' SIZES, SEAMLESS COPPER TUBING, SEE PAGE 16.

HOT ROLLED PLAIN SOFT COPPER IN FLAT SHEETS For Coppersmith Work

Size of Sheet in Inches	Weight in Pounds to Sq. Ft.	Nearest Equiv. B. & S. Ga.	Approx. Total Weight of Sheet
37 1/4"x55 1/2"	*2 1/4 lbs.	No. 16	32.303 lbs.
37 1/4"x55 1/2"	*2 3/4 lbs.	No. 15	39.482 lbs.
37 1/4"x55 1/2"	*3 lbs.	No. 13	50.250 lbs.
43 3/4"x56"	*2 3/4 lbs.	No. 15	46.789 lbs.
43 3/4"x56"	*3 1/4 lbs.	No. 13	55.296 lbs.
50"x56"	*3 1/4 lbs.	No. 13	63.193 lbs.
50"x56"	*4 lbs.	No. 11	77.777 lbs.
53"x56"	*3 1/2 lbs.	No. 13	72.139 lbs.
53"x56"	*4 1/2 lbs.	No. 10	92.750 lbs.
62 1/4"x54"	*4 lbs.	No. 11	93.376 lbs.
62 1/4"x54"	*5 lbs.	No. 10	116.720 lbs.
62 1/4"x69"	*4 lbs.	No. 11	119.312 lbs.
62 1/4"x69"	*5 lbs.	No. 10	149.140 lbs.

HOT ROLLED SOFT PLAIN COPPER CIRCLES

Suitable for Spinning and Coppersmith Work

Dia. of Circle in Inches	Weight in Pounds to Sq. Ft.	Nearest Equiv. B. & S. Ga.	Approx. Total Weight of Circle
15 1/2"	*2 1/2 lbs.	No. 15	3.275 lbs.
15 3/8"	*3 1/4 lbs.	No. 13	4.384 lbs.
15 3/4"	*4 lbs.	No. 11	5.412 lbs.
16 3/8"	*2 lbs.	No. 17	2.924 lbs.
18 "	*3 1/4 lbs.	No. 13	5.743 lbs.
18 1/4"	*3 3/4 lbs.	No. 11	6.814 lbs.
19 3/8"	*2 3/4 lbs.	No. 16	4.606 lbs.
20 1/2"	*3 3/4 lbs.	No. 11	8.595 lbs.
20 1/2"	*4 3/4 lbs.	No. 10	10.887 lbs.
21 "	*2 3/8 lbs.	No. 16	5.711 lbs.
21 1/2"	*4 1/4 lbs.	No. 11	10.714 lbs.
21 1/2"	*5 lbs.	No. 10	12.605 lbs.
22 1/2"	*2 3/8 lbs.	No. 16	6.557 lbs.
25 1/2"	*5 lbs.	No. 10	17.735 lbs.
26 "	*8 lbs.	No. 5	29.496 lbs.
26 3/4"	*2 1/2 lbs.	No. 15	9.750 lbs.
27 "	*2 1/2 lbs.	No. 15	9.940 lbs.
44 "	8 1/2 lbs.	No. 5	89.769 lbs.

COLD ROLLED ANNEALED SPINNING COPPER IN FLAT SHEETS

Size of Sheet in Inches	Weight in Ounces to Sq. Ft.	Nearest Equiv. B. & S. Ga.	Approx. Total Weight of Sheet
36"x96"	16 oz.	No. 23	24.0 lbs.
36"x96"	18 oz.	No. 22	27.0 lbs.
36"x96"	20 oz.	No. 21	30.0 lbs.
36"x96"	24 oz.	No. 20	36.0 lbs.
36"x96"	32 oz.	No. 17	48.0 lbs.

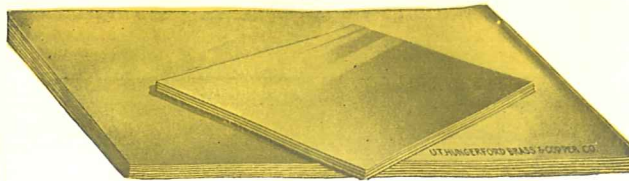
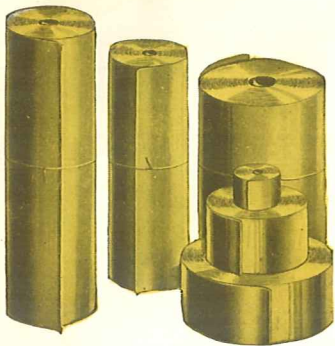
* Carried only in our Boston Stock.

* Carried only in our Boston Stock.
† Carried only in our Philadelphia Stock.

U.T. HUNGERFORD



BRASS & COPPER CO.



STAR ★ BRAND TRIM BRONZE NICKEL SILVER

POLISHED COPPER AND ENGRAVERS' BRASS

The Following Sizes are Carried in our Warehouse Stock Ready for Immediate Shipment

COLD ROLLED PATENT LEVELED POLISHED COPPER IN FLAT SHEETS Polished One Side

Size of Sheet in Inches	Weight in Ounces to Sq. Ft.	Nearest Equiv. B. & S. Ga.	Approx. Total Weight of Sheet
24"x48"	16 oz.	No. 23	8.000 lbs.
30"x60"	12 oz.	No. 26	9.375 lbs.
30"x60"	14 oz.	No. 25	10.937 lbs.
30"x60"	16 oz.	No. 23	12.500 lbs.
30"x60"	18 oz.	No. 22	14.063 lbs.
30"x96"	14 oz.	No. 25	17.500 lbs.
30"x96"	16 oz.	No. 23	20.000 lbs.

QUARTER HARD ACID DIPPED "TRIM" BRONZE IN FLAT SHEETS 10 TO 12 FT. LONG For Doors, Window Casings, Store Fronts

Width in Inches	Thickness in B. & S. Ga.	Nearest Equiv. Sheet Copper Thickness	Approx. Weight to Sq. Ft.
14"	No. 23	16 oz.	1.024 lbs.
14"	No. 20	24 oz.	1.450 lbs.
*15"	No. 22	18 oz.	1.151 lbs.
16"	No. 23	16 oz.	1.024 lbs.
16"	No. 20	24 oz.	1.450 lbs.
18"	No. 20	24 oz.	1.450 lbs.
20"	No. 23	16 oz.	1.024 lbs.
20"	No. 20	24 oz.	1.450 lbs.
24"	No. 23	16 oz.	1.024 lbs.
24"	No. 20	24 oz.	1.450 lbs.
24"	No. 16	36 oz.	2.306 lbs.
30"	No. 20	24 oz.	1.450 lbs.

* This size is carried only in lengths of 8 to 9 ft.

QUARTER HARD GRADE "A" 18% NICKEL SILVER IN FLAT SHEETS, 8 TO 12 FT. LONG Polished One Side

Width in Inches	Thickness in B. & S. Ga.	Approx. Weight to Sq. Ft.
12"	No. 20	1.455 lbs.
12"	No. 22	1.154 lbs.
12"	No. 24	.9153 lbs.
18"	No. 20	1.455 lbs.
18"	No. 22	1.154 lbs.
18"	No. 24	.9153 lbs.
18"	No. 26	.7258 lbs.
20"	No. 22	1.154 lbs.
20"	No. 24	.9153 lbs.
20"	No. 26	.7258 lbs.
24"	No. 20	1.455 lbs.
24"	No. 22	1.154 lbs.
24"	*No. 23	1.028 lbs.
24"	No. 24	.9153 lbs.
24"	No. 26	.7258 lbs.
26"	No. 22	1.154 lbs.
26"	No. 24	.9153 lbs.
30"	No. 20	1.455 lbs.
30"	No. 22	1.154 lbs.
30"	†No. 23	1.028 lbs.
36"	No. 24	.9153 lbs.
36"	No. 20	1.455 lbs.
36"	No. 22	1.154 lbs.
36"	No. 24	.9153 lbs.

* Carried only in our Boston Stock.
† Also carried in Boston, in Plain Unpolished.

COLD ROLLED PATENT LEVELED SIGN COPPER IN PERFECTLY FLAT SHEETS Free From Waves or Buckles

Size of Sheet in Inches	B. & S. Gauge	Approx. Total Weight of Sheet
36"x96"	No. 17	48.0 lbs.

SOFT TEMPER ACID DIPPED "TRIM" BRONZE IN ROLLS OF ABOUT 50 LBS.

Width in Inches	Thickness in B. & S. Ga.	Nearest Equiv. Sheet Copper Thickness	Approx. Weight to Sq. Ft.
10"	No. 27	10 oz.	.6443 lbs.
10"	No. 25	14 oz.	.8124 lbs.
10"	No. 23	16 oz.	1.024 lbs.
12"	No. 27	10 oz.	.6443 lbs.
12"	No. 25	14 oz.	.8124 lbs.
12"	No. 23	16 oz.	1.024 lbs.
14"	No. 28	9 oz.	.5737 lbs.
14"	No. 26	12 oz.	.7235 lbs.
14"	No. 24	15 oz.	.9122 lbs.
14"	No. 23	16 oz.	1.024 lbs.

ENGRAVERS' BRASS 4 TO 8 FT. LONG

Thicknesses	Widths	Approx. Weight to Sq. Ft.
3/32"	... *12" ...	4.131 lbs.
3/32"	... *12" *14"	6.885 lbs.
3/32"	... *8" *10" *12" *14"	9.640 lbs.
1/16"	... *10" *12" ...	2.754 lbs.
1/16"	*6" *8" *10" *12" *14"	5.508 lbs.
1/16"	*6" *8" *10" *12" *14"	8.261 lbs.
1/4"	*6" *8" ... *12" *14"	11.020 lbs.
1/4"	... *8" ... *12" *14"	13.770 lbs.
3/8"	*6" *8" ... *12" *14"	16.520 lbs.
1/2"	... *8" ... *12" *14"	22.030 lbs.

* Carried only in our Boston Stock.
† Carried only in our Philadelphia Stock.

SIGN BRASS

IN FLAT SHEETS, 12 TO 14 FT. LONG

All 16 B. & S. Ga. Thick.

Approx. 2.239 lbs. to Sq. Ft.

8, 10, 12, 14, 16, 18, 20, 22, 24 and 30 inches wide.

SOFT GRADE "A" 18% NICKEL SILVER IN ROLLS OF ABOUT 40 LBS. Unpolished for Spinning and Stamping

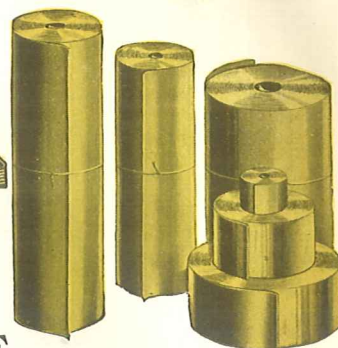
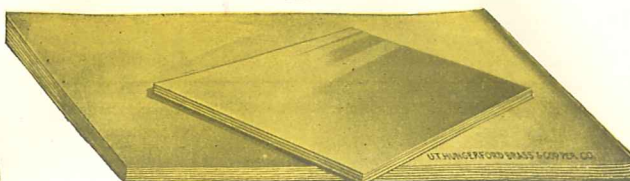
Width in Inches	Thickness in B. & S. Ga.	Approx. Weight to Sq. Ft.
6"	No. 17	2.061 lbs.
6"	No. 18	1.835 lbs.
6"	No. 19	1.634 lbs.
6"	No. 20	1.455 lbs.
6"	No. 21	1.296 lbs.
6"	No. 22	1.154 lbs.
6"	No. 24	.9153 lbs.
6"	No. 25	.8150 lbs.
6"	No. 26	.7258 lbs.
6"	No. 27	.6464 lbs.
6"	No. 28	.5756 lbs.
6"	No. 29	.5126 lbs.
6"	No. 30	.4565 lbs.
6"	No. 32	.3620 lbs.
6"	No. 34	.2871 lbs.
6"	No. 36	.2277 lbs.
9"	No. 17	2.061 lbs.
9"	No. 19	1.634 lbs.
12"	No. 17	2.061 lbs.
12"	No. 19	1.634 lbs.

**BRASS
PLATERS' METAL**
IN ROLLS OF ABOUT 5 LBS.
No. 0, .0025" Thick 6" Wide.
No. 00, .002" " 6" "

U.T.HUNGERFORD



BRASS & COPPER CO.



STAR ★ BRAND

PHOSPHOR BRONZE COMMERCIAL BRONZE

YELLOW METAL SHEATHING, LEAD AND ZINC SHEET

The Following Sizes are Carried in our Warehouse Stock Ready for Immediate Shipment

HALF HARD COMMERCIAL BRONZE IN FLAT SHEETS, 7 TO 8 FT. LONG

Width in Inches	Thickness in B. & S. Ga.	Approximate Weight to Sq. Ft.
4"	No. 14	2.838 lbs.
5"	No. 14	2.838 lbs.
6"	No. 14	2.838 lbs.
8"	No. 14	2.838 lbs.
10"	No. 14	2.838 lbs.
12"	No. 14	2.838 lbs.
14"	No. 14	2.838 lbs.
16"	No. 14	2.838 lbs.
4"	No. 16	2.251 lbs.
5"	No. 16	2.251 lbs.
6"	No. 16	2.251 lbs.
8"	No. 16	2.251 lbs.
10"	No. 16	2.251 lbs.
12"	No. 16	2.251 lbs.
14"	No. 16	2.251 lbs.
16"	No. 16	2.251 lbs.

SPRING TEMPER PHOSPHOR BRONZE IN FLAT SHEETS ABOUT 6 FT. LONG

Width in Inches	Thickness in B. & S. Ga.	Approximate Weight to Sq. Ft.
6"	No. 14	2.9030 lbs.
6"	No. 15	2.5852 lbs.
6"	No. 16	2.3021 lbs.
6"	No. 17	2.0501 lbs.
6"	No. 18	1.8257 lbs.

SPRING TEMPER PHOSPHOR BRONZE IN ROLLS OF ABOUT 40 LBS.

Width in Inches	Thickness in B. & S. Ga.	Approximate Weight to Sq. Ft.
6"	No. 19	1.6258 lbs.
6"	No. 20	1.4478 lbs.
6"	No. 21	1.2893 lbs.
6"	No. 22	1.1482 lbs.
6"	No. 23	1.0225 lbs.
6"	No. 24	.9105 lbs.
6"	No. 26	.7221 lbs.
6"	No. 28	.5726 lbs.
6"	No. 30	.4541 lbs.

YELLOW METAL SHEATHING (MUNTZ METAL) IN FLAT SHEETS

Size of Sheet in Inches	Weight in Ounces to Sq. Ft.	Sheets Per Case	Approximate Total Weight of Sheet
14"x48"	12 oz.	175	3.499 lbs.
14"x48"	14 oz.	150	4.083 lbs.
14"x48"	16 oz.	125	4.667 lbs.
14"x48"	18 oz.	115	5.249 lbs.
14"x48"	20 oz.	100	5.833 lbs.

SHEET LEAD

Not carried in stock, but any size from 12 oz. up can be furnished promptly.

When ordering, please specify:

1. Chemical Lead or Common Lead.
2. Weight per Square Foot.
3. Dimensions of Sheet.
4. If Boxed or Slatted
5. If in Rolls, Weight Desired.

ZINC IN FLAT SHEETS

Size of Sheet in Inches	Zinc Gauge	Approx. Decimal Equiv. in Inches	Approx. Weight to Sq. Ft.
24"x84"	No. 9	.018"	.67 lbs.
30"x84"	No. 9	.018"	.67 lbs.
34"x84"	No. 9	.018"	.67 lbs.
34"x84"	No. 10	.020"	.75 lbs.
34"x84"	No. 11	.024"	.90 lbs.
36"x84"	No. 7	.014"	.52 lbs.
36"x84"	No. 8	.016"	.60 lbs.
36"x84"	No. 9	.018"	.67 lbs.
36"x84"	No. 10	.020"	.75 lbs.
36"x84"	No. 11	.024"	.90 lbs.
36"x84"	No. 12	.028"	1.05 lbs.
36"x84"	No. 13	.032"	1.20 lbs.
36"x84"	No. 14	.036"	1.35 lbs.
38"x108"	*No. 10	.020"	.75 lbs.
48"x96"	No. 8	.014"	.60 lbs.
48"x96"	No. 9	.018"	.67 lbs.
48"x96"	No. 10	.020"	.75 lbs.
48"x96"	No. 11	.024"	.90 lbs.
48"x96"	No. 12	.028"	1.05 lbs.
48"x96"	No. 14	.036"	1.35 lbs.
48"x96"	No. 15	.040"	1.50 lbs.

* Carried only in our Boston Stock.

SPRING BRUSH COPPER IN ROLLS OF ABOUT 20 LBS.

Width in Inches	Thickness in B. & S. Ga.	Approximate Weight to Sq. Ft.
8"	No. 20	1.480 lbs.
8"	No. 22	1.174 lbs.
8"	No. 24	.9307 lbs.
8"	No. 26	.7381 lbs.
8"	No. 28	.5853 lbs.
8"	No. 30	.4642 lbs.
8"	No. 32	.3681 lbs.
8"	No. 34	.2919 lbs.
8"	No. 36	.2315 lbs.

ZINC PLATES

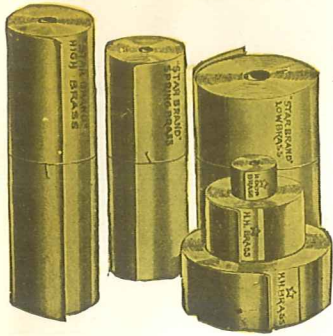
Size of Plate in Inches	Thickness in Inches	Approximate Total Weight of Plate
6"x12"	† 1/2"	9.875 lbs.
6"x12"	† 1"	18.750 lbs.
6"x36"	1/2"	28.625 lbs.
12"x36"	1/2"	56.250 lbs.
24"x24"	* 1/2"	75.000 lbs.
36"x36"	1/2"	168.750 lbs.

† This size with 3/4" hole drilled in center of plate also carried in our Boston Stock.
* This size with 7/8" hole drilled in center of plate also carried in our Boston Stock.
* This size carried only in our Boston Stock.

U.T.HUNGERFORD



BRASS & COPPER CO.



STAR ★ BRAND SHEET BRASS

The Following Sizes are Carried in our Warehouse Stock
Ready for Immediate Shipment.

SOFT SHEET BRASS In Rolls of About 50 Pounds

B. & S. Gauge	Widths in Inches															
No. 14	6	8	10	12	14	16	18	20	22	24	26	28	30	32	34	36
No. 15	6	8	10	12	14	16	18	20	22	24	26	28	30	32	34	36
No. 16	6	8	10	12	14	16	18	20	22	24	26	28	30	32	34	36
No. 18	6	8	10	12	14	16	18	20	22	24	26	28	30	32	34	36
No. 20	6	8	10	12	14	16	18	20	22	24	26	28	30	32	34	36
No. 21	6	8	10	12	14	16	18	20	22	24	26	28	30	32	34	36
No. 22	6	8	10	12	14	16	18	20	22	24	26	28	30	32	34	36
No. 23	6	8	10	12	14	16	18	20	22	24	26	28	30	32	34	36
No. 24	5 1/2	6 1/2	7 1/2	8 1/2	9 1/2	10 1/2	11 1/2	12 1/2	14	16	18	20	22	24	26	28
No. 25	5 1/2	6 1/2	7 1/2	8 1/2	9 1/2	10 1/2	11 1/2	12 1/2	14	16	18	20	22	24	26	28
No. 26	5 1/2	6 1/2	7 1/2	8 1/2	9 1/2	10 1/2	11 1/2	12 1/2	14	16	18	20	22	24	26	28
No. 28	6	8	10	12	14	16	18	20	22	24	26	28	30	32	34	36
No. 30	6	8	10	12	14	16	18	20	22	24	26	28	30	32	34	36
No. 32	6	8	10	12	14	16	18	20	22	24	26	28	30	32	34	36
No. 34	6	8	10	12	14	16	18	20	22	24	26	28	30	32	34	36
No. 36	6	8	10	12	14	16	18	20	22	24	26	28	30	32	34	36

* Carried only in our Boston Stock.

† Carried only in our Philadelphia Stock.

HALF HARD SHEET BRASS IN FLAT SHEETS

Weight in Pounds Per Sq. Ft.	24"x48" Sheets	30"x60" Sheets
	Thickness in Inches and B. & S. Gauge	
16.52	3/8	1/4
11.02	1/4	3/16
8.262	3/16	1/8
5.508	1/8	3/32
4.131	3/32	No. 10
4.490	No. 10	No. 12
3.561	No. 12	No. 13
3.171	No. 13	No. 14
2.824	No. 14	No. 15
2.515	No. 15	† No. 16
2.239	No. 16	No. 17
1.994	No. 17	No. 18
1.776	No. 18	No. 19
1.582	No. 19	No. 20
1.408	No. 20	No. 21
1.254	No. 21	No. 22
1.117	No. 22	No. 24
.8857	No. 24	No. 26
.7024	No. 26	No. 28
.5570	No. 28	

† Carried only in our Philadelphia Stock.

HARD AND HALF HARD SHEET BRASS In Rolls of About 50 Pounds

B. & S. Gauge	Widths in Inches															
HALF HARD TEMPER																
No. 20	.	6	.	8	.	10	12	14								
No. 22	.	6	7	8	9	10	12	14								
No. 24	.	6	.	8	.	10	12	14								
No. 26	5	6	7	8	9	10	12	14								
No. 27	†12	†14								
No. 28	.	6	7	8	9	10	12	14								
HARD TEMPER																
No. 36	...	6	...													
No. 37	...	6	...													
No. 38	...	6	...													
No. 39	...	6	...													

† Carried only in our Philadelphia Stock.

HALF HARD HOOP BRASS In Coils of 10 to 20 Pounds

Widths	Thickness, in B. & S. Gauge															
1 1/4"	16	18	20	22	24	26	28	30	32	34	36	38	40	42	44	46
1 1/8"	16	18	20	22	24	26	28	30	32	34	36	38	40	42	44	46
1 1/2"	16	18	20	22	24	26	28	30	32	34	36	38	40	42	44	46
1 3/4"	16	18	20	22	24	26	28	30	32	34	36	38	40	42	44	46
1 1/4"	16	18	20	22	24	26	28	30	32	34	36	38	40	42	44	46
1 1/2"	16	18	20	22	24	26	28	30	32	34	36	38	40	42	44	46
1 3/4"	16	18	20	22	24	26	28	30	32	34	36	38	40	42	44	46
2	16	18	20	22	24	26	28	30	32	34	36	38	40	42	44	46

HALF HARD SHEET BRASS

In Flat Sheets, 6 and 8 Ft. Long Exact

Approx. Weight in Pounds Per Sq. Ft.	Thick- ness in Inches and B. & S. Gauge	Widths in Inches															
16.52	3/8"	6	8	10	12	14	16	18	20	22	24	26	28	30	32	34	36
11.02	1/4"	6	8	10	12	14	16	18	20	22	24	26	28	30	32	34	36
8.261	3/16"	6	8	10	12	14	16	18	20	22	24	26	28	30	32	34	36
6.885	5/32"	6	8	10	12	14	16	18	20	22	24	26	28	30	32	34	36
5.662	No. 8	6	8	10	12	14	16	18	20	22	24	26	28	30	32	34	36
4.490	No. 10	6	8	10	12	14	16	18	20	22	24	26	28	30	32	34	36
3.998	No. 11	6	8	10	12	14	16	18	20	22	24	26	28	30	32	34	36
3.561	No. 12	6	8	10	12	14	16	18	20	22	24	26	28	30	32	34	36
3.171	No. 13	6	8	10	12	† 14	16	18	20	22	24	26	28	30	32	34	36
2.824	No. 14	6	8	10	12	14	16	18	20	22	24	26	28	30	32	34	36
2.515	No. 15	6	8	10	12	† 14	† 16	18	20	22	24	26	28	30	32	34	36
2.239	No. 16	6	8	10	12	14	16	18	20	22	24	26	28	30	32	34	36
1.994	No. 17	6	8	10	12	† 14	16	18	20	22	24	26	28	30	32	34	36
1.776	No. 18	6	8	10	12	14	16	18	20	22	24	26	28	30	32	34	36
1.582	No. 19	6	8	10	12	14	16	18	20	22	24	26	28	30	32	34	36
1.408	No. 20	6	8	10	12	14	16	18	20	22	24	26	28	30	32	34	36
1.117	No. 22	6	8	10	12	† 14	16	18	20	22	24	26	28	30	32	34	36
.8857	No. 24	6	8	10	12	14	16	18	20	22	24	26	28	30	32	34	36
.7024	No. 26	6	8	10	12	14	16	18	20	22	24	26	28	30	32	34	36

* Carried only in our Boston Stock.
† Carried only in our Philadelphia Stock.
‡ Carried only in our Cleveland Stock.

SPRING SHEET BRASS

IN ROLLS OF ABOUT 50 LBS.

All 8 Inches Wide

Approx. Weight in Pounds Per Sq. Ft.	Thick- ness in B. & S. Gauge	Approx. Weight in Pounds Per Sq. Ft.	Thick- ness in B. & S. Gauge
2.824	No. 14	.9946	No. 23
2.515	No. 15	.8857	No. 24
2.239	No. 16	.7887	No. 25
1.994	No. 17	.7024	No. 26
1.776	No. 18	.6255	No. 27
1.582	No. 19	.5570	No. 28
1.408	No. 20	.4961	No. 29
1.254	No. 21	.4417	No. 30
1.117	No. 22	.2778	No. 34

U.T. HUNGERFORD BRASS & COPPER Co.

STAR ★ BRAND

WIRE

BRASS, COPPER AND PHOSPHOR BRONZE

The Following Sizes are Carried in Our Warehouse Stock Ready for Immediate Shipment



SOFT

HIGH BRASS WIRE IN COILS

In Coils, cut to any required weight or length:
B. & S. Ga. Nos. 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16, 17, 18, 19, 20, 21, 22, 23.

ON SPOOLS

Small Spools ($\frac{1}{4}$ lb. gross):
B. & S. Ga. Nos. 16, 19, 20, 21, 22, 24 and 26.
Medium Size Spools ($\frac{1}{2}$ lb. gross):
B. & S. Ga. Nos. 16, 19, 20, 21, 22, 24 and 26.
Large Spools (1 lb. gross):
B. & S. Ga. Nos. 16, 19, 20, 21, 22, 24 and 26.

HARD

HIGH BRASS WIRE

In Coils, cut to any required weight:
B. & S. Ga. Nos. 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16.

SOFT LOW BRASS BRUSH WIRE

In Coils, cut to any required weight:
B. & S. Ga. Nos. 21, 22, 23, 24, 25, 26, 27 and 28.

SPRING BRASS WIRE IN COILS

In Coils of 10 to 12 lbs.:
B. & S. Ga. Nos. 2, 3, 4, 5, 6 and 7.
In Coils of 5 to 7 lbs.:
B. & S. Ga. Nos. 8, 9, 10, 11, 12, 13, 14, 15, 16, 17, 18, 19, 20, 21, 22, 23, 24.
In Coils of 40 to 50 lbs.:
B. & S. Ga. Nos. 2, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15 and 16.

ON SPOOLS

Small Spools ($\frac{1}{4}$ lb. gross):
B. & S. Ga., Nos. 16, 19 and 20.
Medium Size Spools ($\frac{1}{2}$ lb. gross):
B. & S. Ga., Nos. 16, 19 and 20.
Large Spools (1 lb. gross):
B. & S. Ga., Nos. 16, 19 and 20.

ROUND EDGE

FLAT BRASS WIRE

In Coils of 40 to 50 lbs.
 $\frac{1}{4}$ " wide by No. 14 B. & S. Ga. (.064")

SOFT COPPER WIRE IN COILS

In Coils of about 25 lbs.
 $\frac{3}{8}$ ", $\frac{5}{16}$ " and B. & S. Ga. Nos. 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16, 17, 18, 19, 20, 21, 22, 23 and 24.

ON SPOOLS

Small Spools ($\frac{1}{4}$ lb. gross):
B. & S. Ga. Nos. 16, 19, 21, 22, 24, 25, 26 and 27.
Medium Size Spools ($\frac{1}{2}$ lb. gross):
B. & S. Ga. Nos. 16, 19, 21, 22, 24, 25, 26 and 27.
Large Spools (1 lb. gross):
B. & S. Ga. Nos. 16, 19, 21, 22, 24, 25, 26 and 27.

COPPER

RADIO WIRE IN COILS AND ON REELS

7-Strand, Plain, Copper Wire:
Nos. 22 and 24 B. & S. Gauge on reels of about 100 lbs.
22 B. & S. Ga., also in coils of 100, 150 and 200 ft. packed in individual cartons as illustrated above:
7-Strand, Tinned, Copper Wire:
No. 22 B. & S. Gauge.
In Coils of 100, 150 and 200 ft. packed in individual cartons as illustrated above:
Also on reels of about 100 lbs.
Single-Strand, Plain, Copper Wire:
No. 14 B. & S. Gauge.
In Coils of 100, 150 and 200 ft., packed in individual cartons as illustrated above:
Also in coils of about 25 lbs.
7-Strand, Enameled Copper Wire:
.024" in Coils of 100, 150 and 200 ft., packed in individual cartons, as illustrated above; also on reels of about 100 lbs.

SPRING TEMPER PHOSPHOR BRONZE WIRE

In Coils of 5 to 7 lbs. only:
B. & S. Ga. Nos. 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16, 17, 18, 20, 21, 22, 24, 25 and 27.
In Coils of about 60 lbs.:
B. & S. Ga. Nos. 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, and 16.

PHOSPHOR BRONZE TILLER ROPE

On Reels or in Coils of any required length:
 $\frac{3}{16}$ "; $\frac{1}{4}$ ", $\frac{5}{16}$ " and $\frac{3}{8}$ " diameter.

BRASS AND COPPER WIRE

Table of Approximate Weights
In Pounds per 1000 Linear Feet

B. & S. Gauge Numbers	Brass Pounds	Copper Pounds
1	241.4	253.3
2	191.4	200.9
3	151.8	159.3
4	120.4	126.4
5	95.47	100.2
6	75.71	79.46
7	60.04	63.02
8	47.61	49.98
9	37.76	39.63
10	29.94	31.43
11	23.75	24.92
12	18.83	19.77
13	14.93	15.68
14	11.84	12.43
15	9.393	9.858
16	7.449	7.818
17	5.907	6.200
18	4.684	4.917
19	3.715	3.899
20	2.946	3.092
21	2.336	2.452
22	1.853	1.945
23	1.469	1.542
24	1.165	1.223
25	.9241	.9699
26	.7328	.7692
27	.5812	.6100
28	.4609	.4837
29	.3655	.3836
30	.2898	.3042
31	.2299	.2413
32	.1823	.1913
33	.1446	.1517
34	.1146	.1203
35	.09092	.09542
36	.0721	.07568

The above weights are theoretically correct, but variations must be expected in practice.



U.T.HUNGERFORD



BRASS & COPPER CO.



STAR ★ BRAND



BRASS ROD AND BAR



In Stock Ready for Immediate Shipment

FREE CUTTING ROUND BRASS ROD 10 to 12-Ft. Random Lengths

FREE CUTTING HEXAGON, SQUARE, HALF ROUND BRASS ROD 10 to 12-Ft. Random Lengths

HALF HARD RECTANGULAR BRASS BAR 8 to 10-Ft. Random Lengths

Stock Sizes in Inches	Weight in Pounds per Foot	Stock Sizes in Inches	Weight in Pounds per Foot
$\frac{1}{8}$ * $\frac{3}{16}$	.027	$\frac{13}{16}$	1.913
$\frac{1}{8}$	.045	$\frac{7}{8}$	2.218
$\frac{3}{16}$ $\frac{5}{16}$	.073	$\frac{15}{16}$	2.546
$\frac{3}{16}$	.102	1	2.897
$\frac{7}{16}$	.138	$1\frac{1}{16}$	3.271
$\frac{1}{4}$	.181	$1\frac{1}{8}$	3.667
$\frac{5}{16}$ $\frac{9}{16}$	.225	$1\frac{3}{16}$	4.086
$\frac{5}{16}$	.283	$1\frac{1}{4}$	4.527
$\frac{11}{16}$	.335	$1\frac{5}{16}$	4.991
$\frac{3}{8}$	.407	$1\frac{3}{8}$	5.478
$\frac{13}{16}$	.462	$1\frac{7}{16}$	5.987
$\frac{7}{16}$	.555	$1\frac{1}{2}$	6.519
$\frac{15}{16}$ $\frac{1}{2}$	.625	$1\frac{9}{16}$	7.073
$\frac{1}{2}$	.724	$1\frac{5}{8}$	7.651
$\frac{17}{16}$ $\frac{3}{4}$	.805	$1\frac{11}{16}$	8.250
$\frac{3}{4}$	.917	$1\frac{3}{4}$	8.873
$\frac{19}{16}$	1.00	$1\frac{7}{8}$	10.19
$\frac{5}{8}$	1.132	2	11.59
$\frac{21}{16}$	1.23	$2\frac{1}{8}$	13.08
$\frac{11}{16}$	1.369	$2\frac{1}{4}$	14.67
$\frac{23}{16}$ $\frac{3}{4}$	1.630	$2\frac{1}{2}$	18.11
$\frac{25}{16}$ $\frac{3}{2}$	1.77	$2\frac{3}{4}$	21.91
		3	26.08

* Carried only in our Boston Stock.

ROUND NAVAL BRASS ROD 10 to 12-Ft. Random Lengths

Stock Sizes in Inches	Weight per Foot	Stock Sizes in Inches	Weight per Foot
$\frac{1}{4}$	.1788	$1\frac{1}{2}$	6.438
$\frac{3}{8}$	.4024	$1\frac{5}{8}$	7.556
$\frac{1}{2}$	.7154	$1\frac{3}{4}$	8.763
$\frac{17}{16}$	.796	$1\frac{7}{8}$	10.06
$\frac{9}{16}$	.9054	2	11.45
$\frac{5}{8}$	1.118	$2\frac{1}{4}$	14.49
$\frac{7}{8}$	2.191	$2\frac{1}{2}$	17.88
1	2.862	3	25.75
$1\frac{1}{4}$	4.471	$3\frac{1}{4}$	30.22

BRASS CHANNEL 12 to 14-Ft. Random Lengths

Stock Sizes in Inches	B. & S. Gauge	Weight Per Ft.
$\frac{3}{8}$ Side by $\frac{3}{8}$ Base	No. 18	.1501
$\frac{3}{8}$ " " $\frac{1}{2}$ "	No. 14	.3125
$\frac{3}{8}$ " " $\frac{1}{2}$ "	No. 18	.2040
$\frac{3}{8}$ " " $\frac{5}{8}$ "	No. 14	.3992
$\frac{3}{8}$ " " $\frac{5}{8}$ "	No. 18	.2579
$\frac{3}{8}$ " " $\frac{3}{4}$ "	No. 14	.4850
$\frac{3}{8}$ " " $\frac{3}{4}$ "	No. 18	.3118

Diameter in Inches	Sizes Carried in Stock Weight in Pounds per Foot		
	HEXAGON	SQUARE	HALF ROUND
$\frac{1}{8}$		.058	
$\frac{3}{16}$	.112	.130	
$\frac{1}{4}$	.200	.231	.090
$\frac{5}{16}$	.312	.360	
$\frac{3}{8}$	.449	.519	.203
$\frac{7}{16}$	.612	.706	
$\frac{1}{2}$	.799	.922	.362
$\frac{9}{16}$	1.011	1.167	
$\frac{5}{8}$	1.248	1.441	.566
$\frac{11}{16}$	1.510		
$\frac{3}{4}$	1.797	2.075	.815
$\frac{13}{16}$	2.109		
$\frac{7}{8}$	2.446	2.824	1.109
$\frac{15}{16}$	2.808		
1	3.195	3.689	1.448
$1\frac{1}{16}$	3.607		
$1\frac{1}{8}$	4.043		
$1\frac{1}{4}$	4.992	5.764	
$1\frac{3}{8}$	6.040		
$1\frac{1}{2}$	6.602		
$1\frac{5}{8}$	7.188		
$1\frac{3}{4}$	8.436		
$1\frac{7}{8}$	9.784		
2	11.23		
	12.78		

HALF OVAL BRASS ROD 10 to 12-Ft. Random Lengths

Stock Sizes in Inches	Weight in Pounds per Foot	Stock Sizes in Inches	Weight in Pounds per Foot
$\frac{3}{8} \times \frac{3}{16}$	1.104	$\frac{3}{4} \times \frac{1}{4}$	.508
$\frac{1}{2} \times \frac{1}{8}$	.167	$\frac{7}{8} \times \frac{1}{4}$	.584
$\frac{5}{8} \times \frac{3}{16}$	.312	$1 \times \frac{1}{4}$	.650

HARD BRASS ANGLE 12 to 14-Ft. Random Lengths

Stock Sizes in Inches	
$\frac{1}{2} \times \frac{1}{2} \times \frac{1}{16}$	$\frac{3}{4} \times \frac{3}{4} \times \frac{1}{8}$
$\frac{3}{4} \times \frac{3}{4} \times \frac{1}{16}$	$1 \times 1 \times \frac{1}{8}$
$1 \times 1 \times \frac{1}{16}$	$1\frac{1}{2} \times 1\frac{1}{2} \times \frac{1}{8}$
	$2 \times 2 \times \frac{1}{8}$

† Carried only in our Philadelphia Stock.

Our "Star Brand" Brass Rod is made according to a formula adopted after a long series of experiments to determine the utmost that could be secured in free turning and drilling characteristics, without disturbing the other physical features, such as tensile strength, yield point and percentage of elongation, which are also essential.

Widths in Inches	Sizes Carried in Stock Thickness and Weight per Lineal Foot							
	$\frac{1}{16}$ "	$\frac{3}{32}$ "	$\frac{1}{8}$ "	$\frac{3}{16}$ "	$\frac{1}{4}$ "	$\frac{5}{16}$ "	$\frac{3}{8}$ "	$\frac{1}{2}$ "
$\frac{1}{4}$	.057	.086	.114					
$\frac{3}{8}$	.071	.085	.129	.172	.258	.344		
$\frac{1}{2}$	.100							
$\frac{3}{4}$	.114	.172	.228	.344	.458			
$\frac{1$	.143	.215	.286	.429	.573			
$\frac{1$	.171	.258	.342	.515	.687	1.029		
$\frac{1$	.200	.301	.401	.601	.792			
$\frac{1$	.229	.344	.456	.687	.916	1.374	1.832	
$\frac{1$	.257		.514					
$\frac{1$	.276	.429	.570	.859	1.145	1.718	2.291	
$\frac{1$	.343	.515	.684	1.030	1.374	2.061	2.749	
$\frac{1$	.400	.601	.800					
$\frac{1$	.458	.687	.912	1.374	1.832	2.749	3.665	
$\frac{1$	.516	.773			2.061			
$\frac{1$	.572	.859	1.140	1.718	2.291	3.436	4.582	
$\frac{1$	.687	1.032	1.368	2.061	2.749	4.124	5.500	
$\frac{1$	.801	1.202	1.596		3.206			
$\frac{1$	.916	1.376	1.824	2.748	3.664	5.498		
$\frac{1$	1.145	1.720	2.280	3.435	4.580	6.873		
$\frac{1$				4.560	6.870	9.160	13.746	18.328

† Carried only in our Philadelphia Stock

Rectangular, Half Hard Brass Bar in any of above thicknesses and in any special widths up to 10 inches can be sawed from stock on hand in New York and shipped promptly.

ROUND BRASS DRILL ROD Stubbs Gauge Sizes

10 Ft. Long, All Nos. 4 to 11 incl.
6 Ft. " " " 12 to 18 incl.

ROUND YELLOW METAL ROD (Muntz Metal) 10 to 12-Ft. Random Lengths

Stock Sizes in Inches	Weight in Pounds per Foot	Stock Sizes in Inches	Weight in Pounds per Foot
$\frac{3}{16}$	.101	$1\frac{1}{4}$	4.52
$\frac{1}{4}$	.181	$1\frac{5}{8}$	4.99
$\frac{5}{16}$	.282	$1\frac{3}{4}$	5.47
$\frac{3}{8}$	.407	$1\frac{7}{8}$	5.98
$\frac{7}{16}$	.554	$1\frac{1}{2}$	6.51
$\frac{1}{2}$	.724	$1\frac{5}{8}$	7.65
$\frac{5}{8}$	1.132	$1\frac{3}{4}$	8.25
$\frac{11}{16}$	1.369	$1\frac{7}{8}$	8.87
$\frac{3}{4}$	1.630	2	10.19
$\frac{13}{16}$	1.913	$2\frac{1}{4}$	11.59
$\frac{7}{8}$	2.218	$2\frac{1}{2}$	14.67
1	2.897	$2\frac{3}{4}$	18.11
$1\frac{1}{8}$	3.667	3	21.91
			26.08

U.T. HUNGERFORD



BRASS & COPPER CO.



TOBIN BRONZE ROD

RECTANGULAR COPPER BAR
COPPER ROD, PHOSPHOR BRONZE ROD AND PHOSPHOR
BRONZE BEARING BUSHINGS

The Following Sizes are Regularly Carried in our Warehouse
Stock Ready for Immediate Shipment

ROUND AND HEXAGON GENUINE
TOBIN BRONZE ROD
8 to 12-Ft. Random Lengths

Diameter in Inches	Sizes Carried in Stock Weight in Pounds per Foot	
	ROUND	HEXAGON
1/8	.0447	
3/16	.1006	
1/4	.1788	
5/16	.2794	
3/8	.4024	*.444
7/16	.5477	.604
1/2	.7154	.789
9/16	.9054	.998
5/8	1.118	1.232
11/16	1.353	1.491
3/4	1.610	1.775
13/16	1.889	
7/8	2.191	2.416
15/16	2.515	
1	2.862	3.155
1 1/16	3.230	3.562
1 1/8	3.622	3.993
1 1/4	4.035	
1 1/2	4.471	4.930
1 3/4	4.929	
1 7/8	5.410	
2	5.913	6.520
2 1/8	6.438	7.099
2 1/4	7.556	8.332
2 1/2	8.763	
2 3/4	10.06	
3	11.45	12.62
3 1/4	14.49	
3 1/2	16.14	
3 3/4	17.88	
4	25.75	

* Carried only in our Boston Stock.

ROUND
PHOSPHOR BRONZE
ROD
6 to 12-Ft. Random Lengths

Stock Sizes in Inches	Weight in Pounds Per Ft.	Stock Sizes in Inches	Weight in Pounds Per Ft.
3/16	.106	1	3.02
1/4	.190	1 1/16	3.44
5/16	.294	1 1/8	3.82
3/8	.424	1 1/4	4.71
1/2	.755	1 3/8	5.71
5/8	1.17	1 1/2	6.79
3/4	1.69	1 3/4	9.21
7/8	2.31	2	12.08

RECTANGULAR
HARD DRAWN COPPER BAR
8 to 12-Ft. Random Lengths

Widths in Inches	Sizes Carried in Stock and Weight in Pounds per Foot							
	1/16"	3/32"	1/8"	3/16"	1/4"	5/16"	3/8"	1/2"
3/8	.0904	†.1356	.1808					
1/2	.1206	.1809	.2412	.3617	.4823			
5/8	.1507	.2260	.3014	.4522	.6029			
3/4	.1809	.2713	.3617	.5426	.7235			
7/8	.2110	.3165	.4220	.6330	.8440	1.055		
1	.2412	.3618	.4823	.7235	.9646	1.206	1.447	
1 1/4	†.3014	.4521	.6029	.9043	1.206		1.809	
1 1/2	†.3617	.5425	.7235	1.085	1.447		2.170	2.894
1 3/4	†.4220		.8440		1.688			3.376
2	†.4824	†.7235	.9646	1.447	1.929	2.412	2.894	3.858
2 1/2			1.206	1.809	2.412		3.617	
3			1.477	2.170	2.894		4.341	
4			1.929		3.858			
5					4.824			
6					5.788		8.682	
13	3.1356	4.7034	6.271	9.406	12.542	15.678	18.813	25.084

† Carried only in our Philadelphia Stock.

HARD DRAWN ROUND
COPPER ROD
10 to 12-Ft. Random Lengths

Stock Sizes in Inches	Weight in Pounds Per Ft.	Stock Sizes in Inches	Weight in Pounds Per Ft.
1/8	.047	3/4	1.70
3/16	.106	7/8	2.32
1/4	.189	1	3.03
5/16	.296	1 1/8	3.83
3/8	.426	1 1/4	4.73
7/16	.580	1 3/8	5.73
1/2	.757	1 1/2	6.82
9/16	.957	1 3/4	9.28
5/8	1.184	2	12.12

‡ Carried only in our Cleveland Stock.
Rectangular Hard Copper Bar in any of
above thicknesses and in special widths up
to 13 inches—any length not exceeding 12
feet—can be sawed from stock on hand in
New York and shipped promptly.

SOFT ROUGH FINISH
SQUARE COPPER ROD
10 to 12-Ft. Random Lengths

Stock Sizes in Inches	Weight in Pounds Per Ft.	Stock Sizes in Inches	Weight in Pounds Per Ft.
1 1/4	6.029	1 1/2	8.681

PHOSPHOR BRONZE BEARING BUSHINGS
CORED AND SOLID
CAST IN THE ROUGH

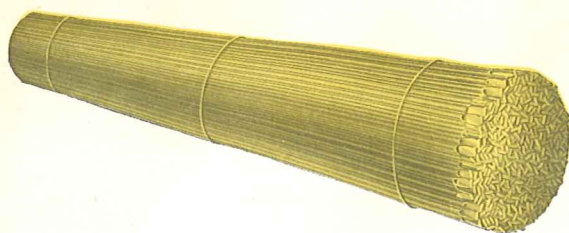
12-Inch Lengths Cored	Outside Diameter. . . .	1 3/4"	1 3/4"	2"	2"	2 1/4"	2 1/4"	2 1/4"	2 1/2"	2 1/2"	2 1/2"	2 3/4"	2 3/4"	2 3/4"	3"	3"
	Inside Diameter. . . .	3/4"	1"	1"	1 1/4"	1"	1 1/4"	1 1/2"	1"	1 1/4"	1 1/2"	1 1/4"	1 1/2"	1 3/4"	2"	2 1/4"
6-Inch Lengths Cored	Cutside Diameter.	1"	1 1/4"	1 1/2"	1 1/2"	12-Inch Lengths Solid	1"	1 1/4"	1 1/2"	1 3/4"	2"	2 1/4"	2 1/2"	2 3/4"	3"	
	Inside Diameter.	3/8"	1/2"	1/2"	5/8"											

Our TOBIN BRONZE ROD is the genuine product of the original inventors and
patentees. It is a composition of Copper, Tin and Zinc in such proportions, and manipu-
lated in such manner during the various processes of manufacture as to insure uniform
texture, exceedingly high tensile strength and extreme resistance to corrosion.

U.T.HUNGERFORD



BRASS & COPPER CO.



HUNGERFORD

STAR ★ BRAND

BRONZE WELDING ROD

Ready For Immediate Shipment From Our Warehouse Stock.

$\frac{1}{8}$, $\frac{3}{16}$ and $\frac{1}{4}$ Inch Diameter. 3 Ft. Exact Lengths.

A free flowing, tough, "all purpose" Bronze filler rod with an unusually low melting point. Every length flattened on one end and embossed with our name as illustrated above.

GENUINE TOBIN BRONZE WELDING ROD

$\frac{1}{8}$, $\frac{3}{16}$ and $\frac{1}{4}$ Inch Diameter. 3 Ft. Exact Lengths.

HUNGERFORD STAR BRAND BRASS WELDING ROD

$\frac{1}{8}$, $\frac{3}{16}$ and $\frac{1}{4}$ Inch Diameter. 3 Ft. Exact Lengths.

WEIGHTS, TENSILE STRENGTH AND MELTING POINTS

Diameter	Approximate Weight in Lbs. per Foot			Approximate Melting Point		Approximate Tensile Strength Lbs. per Sq. Inch
	$\frac{1}{8}$ "	$\frac{3}{16}$ "	$\frac{1}{4}$ "	Centigrade	Fahrenheit	
Hungerford Bronze	0.04421	0.1012	0.1773	900°	1652°	63000
Tobin Bronze	0.04471	0.1006	0.1788	885°	1625°	54000
Phosphor Bronze	0.04726	0.1063	0.189	1050°	1922°	45000
Hungerford Brass	0.04413	0.1013	0.177	910°	1670°	47800

The melting point of Hungerford Bronze filler rod (1652° F.) is lower than most ordinary iron and steel alloys, which precludes excessive heating and possible burning of the base metal. Hungerford Bronze is easy to machine and where desired will take a high finish.

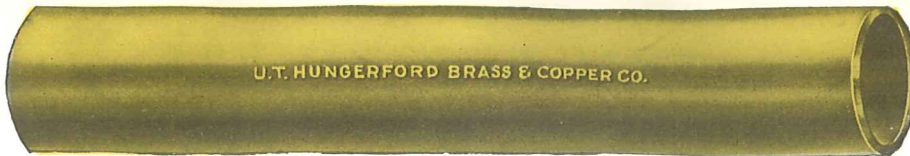


Packed in cases of about 250 lbs. net. Smaller quantities furnished in burlapped bundles if so specified.

U.T. HUNGERFORD



BRASS & COPPER CO.



STAR ★ BRAND

PLAIN BRAZED BRASS TUBE

The Following Sizes Are Carried in Our Warehouse Stock Ready For Immediate Shipment.

PLAIN ROUND BRAZED BRASS TUBE HARD TEMPER

12 to 14-Ft. Lengths (Except as Noted)

OUTSIDE Diameter in Inches	Wall Thickness in B. & S. Ga.	Approx. Weight in Lbs. Per Ft.
1/4"	No. 18	.099 lbs.
5/16"	No. 18	.128 lbs.
3/8"	No. 18	.158 lbs.
7/8"	No. 24	.084 lbs.
1/16"	No. 18	.180 lbs.
1/2"	No. 18	.217 lbs.
1/2"	No. 22	.141 lbs.
1/2"	No. 24	.113 lbs.
9/16"	No. 18	.240 lbs.
5/8"	No. 18	.276 lbs.
5/8"	No. 22	.178 lbs.
5/8"	No. 24	.142 lbs.
3/4"	†No. 17	.373 lbs.
3/4"	No. 18	.335 lbs.
3/4"	No. 22	.215 lbs.
3/4"	No. 24	.172 lbs.
7/8"	No. 18	.390 lbs.
7/8"	No. 22	.248 lbs.
7/8"	No. 24	.198 lbs.
1"	†No. 17	.506 lbs.
1"	No. 18	.453 lbs.
1"	No. 20	.362 lbs.
1"	No. 22	.289 lbs.
1"	No. 24	.231 lbs.
1 1/8"	No. 18	.500 lbs.
1 1/4"	No. 17	.638 lbs.
1 1/4"	*No. 19	.510 lbs.
1 1/4"	No. 20	.456 lbs.
1 3/8"	No. 17	.690 lbs.
1 3/8"	No. 20	.500 lbs.
1 1/2"	No. 15	.964 lbs.
1 1/2"	†No. 17	.771 lbs.
1 1/2"	*No. 19	.615 lbs.
1 1/2"	No. 20	.549 lbs.
1 5/8"	No. 17	.820 lbs.
1 3/4"	No. 15	1.131 lbs.
1 3/4"	No. 17	.903 lbs.
1 3/4"	No. 20	.643 lbs.
2"	§No. 14	1.453 lbs.
2"	†No. 17	1.036 lbs.
2"	*No. 19	.825 lbs.
2"	No. 20	.737 lbs.
2 1/4"	§No. 14	1.640 lbs.
2 1/4"	No. 17	1.168 lbs.
2 1/2"	§No. 14	1.828 lbs.
2 1/2"	No. 17	1.301 lbs.
3"	§No. 14	2.203 lbs.
3"	*No. 17	1.566 lbs.

* Carried only in our Boston Stock.
 † Carried only in our Philadelphia Stock.
 ‡ Carried only in 15-Ft. Exact Lengths.
 § Carried in both 12 to 14-Ft. Random and 22-Ft. Exact Lengths.

NICKEL PLATED, ROUND BRAZED BRASS TUBE HARD TEMPER

12 to 14-Ft. Random Lengths

OUTSIDE Diameter in Inches	Wall Thickness in B. & S. Ga.	Approx. Weight in Lbs. Per Ft.
2"	No. 20	.737 lbs.

PLAIN ROUND, HARD TEMPER COMMERCIAL BRONZE TUBE

15-Ft. Exact Lengths

OUTSIDE Diameter in Inches	Wall Thickness in B. & S. Ga.	Approx. Weight in Lbs. Per Ft.
2 1/2"	No. 14	1.530 lbs.
2 1/2"	No. 14	1.925 lbs.

PLAIN SQUARE BRAZED BRASS TUBE HARD TEMPER

12 to 14-Ft. Random Lengths

OUTSIDE Diameter in Inches	Wall Thickness in B. & S. Ga.	Approx. Weight in Lbs. Per Ft.
3/8"	No. 18	.158 lbs.
1/2"	†No. 17	.241 lbs.
1/2"	No. 18	.217 lbs.
5/8"	†No. 17	.307 lbs.
5/8"	No. 18	.276 lbs.
5/8"	No. 22	.178 lbs.
3/4"	†No. 17	.373 lbs.
3/4"	No. 18	.335 lbs.
3/4"	No. 22	.215 lbs.
7/8"	No. 18	.390 lbs.
7/8"	No. 22	.248 lbs.
1"	†No. 17	.506 lbs.
1"	No. 18	.453 lbs.
1"	No. 22	.289 lbs.
1 1/4"	*No. 18	.571 lbs.

* Carried only in our Boston Stock.
 † Carried only in our Philadelphia Stock.

PLAIN ROUND BRAZED BRASS TUBE SOFT TEMPER

12 to 14-Ft. Random Lengths

OUTSIDE Diameter in Inches	Wall Thickness in B. & S. Ga.	Approx. Weight in Lbs. Per Ft.
1/4"	No. 22	.067 lbs.
5/16"	No. 19	.116 lbs.
3/8"	†No. 17	.175 lbs.
3/8"	No. 18	.158 lbs.
7/16"	†No. 17	.208 lbs.
7/16"	No. 18	.180 lbs.
1/2"	†No. 17	.241 lbs.
1/2"	No. 18	.217 lbs.

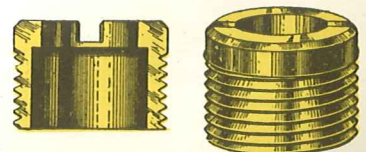
† Carried only in our Philadelphia Stock.

SEAMLESS BRASS AND MUNTZ METAL CONDENSER TUBES TINNED INSIDE AND OUT

12, 14, 16, 18 and 20-Ft. Exact Lengths

OUTSIDE Diameter in Inches	Wall Thickness in Stubbs Ga.	Approx. Weight in Lbs. Per Ft.
5/8"	No. 18	.327 lbs.
3/4"	No. 18	.397 lbs.

Above can be furnished in any intermediate exact length at short notice. We have facilities for furnishing promptly from Mill, Brass, Muntz or Admiralty Mixture Condenser Tubes, Tinned or Plain, in any special size and length.



BRASS CONDENSER TUBE FERRULES

Standard 14 and 16 Thread
For 5/8 and 3/4-Inch Tubes.

U.T.HUNGERFORD



BRASS & COPPER CO.

STAR ★ BRAND

FANCY PATTERN BRAZED BRASS TUBING

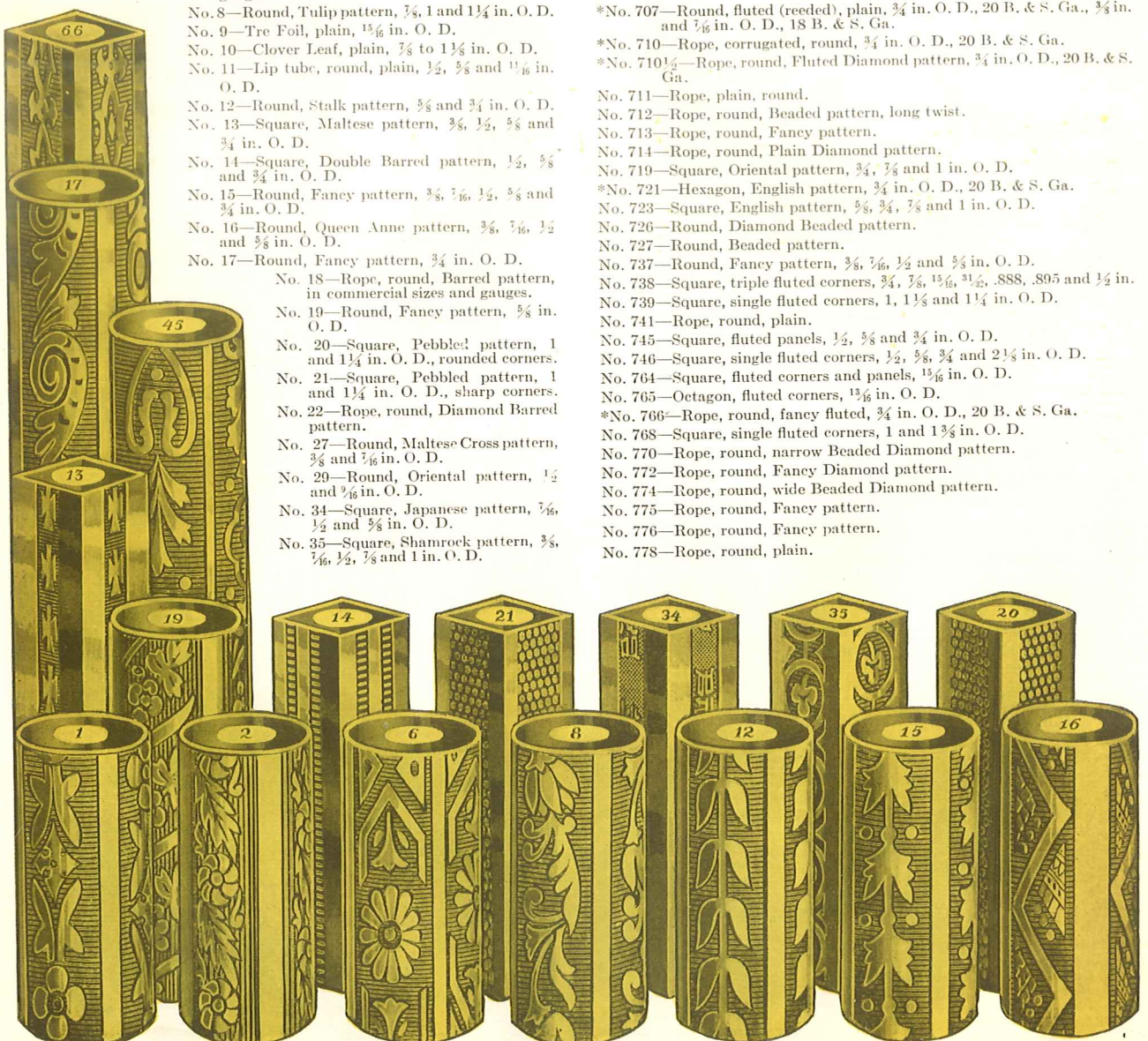
Patterns and Sizes Marked With An Asterisk (*) Are Available for Immediate Shipment from Our Warehouse Stock

Other Sizes Furnished Promptly from Mill

Where sizes are not specified, a majority of the following Fancy Patterns of Brazed Brass Tubing can be furnished in any size from $\frac{3}{8}$ to 2 inch OUTSIDE DIAMETER, No. 16 B. & S. Ga. (.0508 inch) to No. 22 B. & S. Ga. (.025 inch). Specific information regarding range of sizes for any particular type, will be furnished upon request.

- No. 1—Round, Royal pattern, $\frac{3}{8}$, $\frac{3}{4}$, $\frac{7}{8}$ and 1 in. O. D.
- No. 2—Round, Italian pattern, $\frac{3}{8}$, $\frac{7}{16}$, $\frac{3}{4}$, $\frac{7}{8}$ and 1 in. O. D.
- No. 3—Half round, plain, round corners, 1 to 2 in. O. D.
- No. 3½—Half round, plain, square corners, $\frac{3}{8}$, $\frac{1}{2}$, $\frac{3}{4}$ and $\frac{7}{8}$ in. O. D.
- No. 4—Octagon, plain, $\frac{1}{2}$ to $1\frac{1}{2}$ in. O. D.
- No. 5—Hexagon, plain, $\frac{5}{16}$ to 2 in. O. D.
- No. 6—Round, Daisy pattern, $\frac{3}{4}$ in. O. D.
- No. 7—Rectangular, plain, in commercial sizes and gauges.
- No. 8—Round, Tulip pattern, $\frac{7}{8}$, 1 and $1\frac{1}{4}$ in. O. D.
- No. 9—Tre Foil, plain, $\frac{15}{16}$ in. O. D.
- No. 10—Clover Leaf, plain, $\frac{7}{8}$ to $1\frac{1}{8}$ in. O. D.
- No. 11—Lip tube, round, plain, $\frac{1}{2}$, $\frac{5}{8}$ and $\frac{15}{16}$ in. O. D.
- No. 12—Round, Stalk pattern, $\frac{5}{8}$ and $\frac{3}{4}$ in. O. D.
- No. 13—Square, Maltese pattern, $\frac{3}{8}$, $\frac{1}{2}$, $\frac{5}{8}$ and $\frac{3}{4}$ in. O. D.
- No. 14—Square, Double Barred pattern, $\frac{1}{2}$, $\frac{5}{8}$ and $\frac{3}{4}$ in. O. D.
- No. 15—Round, Fancy pattern, $\frac{3}{8}$, $\frac{7}{16}$, $\frac{1}{2}$, $\frac{5}{8}$ and $\frac{3}{4}$ in. O. D.
- No. 16—Round, Queen Anne pattern, $\frac{3}{8}$, $\frac{7}{16}$, $\frac{1}{2}$ and $\frac{5}{8}$ in. O. D.
- No. 17—Round, Fancy pattern, $\frac{3}{4}$ in. O. D.
- No. 18—Rope, round, Barred pattern, in commercial sizes and gauges.
- No. 19—Round, Fancy pattern, $\frac{5}{8}$ in. O. D.
- No. 20—Square, Pebbled pattern, 1 and $1\frac{1}{4}$ in. O. D., rounded corners.
- No. 21—Square, Pebbled pattern, 1 and $1\frac{1}{4}$ in. O. D., sharp corners.
- No. 22—Rope, round, Diamond Barred pattern.
- No. 27—Round, Maltese Cross pattern, $\frac{3}{8}$ and $\frac{7}{16}$ in. O. D.
- No. 29—Round, Oriental pattern, $\frac{1}{2}$ and $\frac{7}{16}$ in. O. D.
- No. 34—Square, Japanese pattern, $\frac{7}{16}$, $\frac{1}{2}$ and $\frac{5}{8}$ in. O. D.
- No. 35—Square, Shamrock pattern, $\frac{3}{8}$, $\frac{7}{16}$, $\frac{1}{2}$, $\frac{5}{8}$ and 1 in. O. D.

- *No. 38—Round, Scottish pattern, $\frac{3}{4}$ in. O. D., 20 B. & S. Ga.
- No. 45—Round, Fancy pattern, $\frac{3}{8}$ and $\frac{3}{4}$ in. O. D.
- No. 46—Square, Queen Anne pattern, $\frac{3}{4}$ and $\frac{7}{8}$ in. O. D.
- No. 59—Square, Diamond pattern (4 lines), $\frac{3}{4}$ and $\frac{7}{8}$ in. O. D.
- No. 62—Cable, round, plain, $\frac{7}{16}$ in. O. D.
- No. 64—Square, Leaf pattern, $\frac{5}{8}$ and $\frac{3}{4}$ in. O. D.
- No. 66—Square, Fancy pattern, $\frac{5}{8}$ and $\frac{3}{4}$ in. O. D.
- No. 702—Square, plain.
- No. 705—Square, twisted, plain, $\frac{5}{8}$ to $1\frac{1}{4}$ in. O. D.
- *No. 707—Round, fluted (reeded), plain, $\frac{3}{4}$ in. O. D., 20 B. & S. Ga., $\frac{3}{8}$ in. and $\frac{7}{16}$ in. O. D., 18 B. & S. Ga.
- *No. 710—Rope, corrugated, round, $\frac{3}{4}$ in. O. D., 20 B. & S. Ga.
- *No. 710½—Rope, round, Fluted Diamond pattern, $\frac{3}{4}$ in. O. D., 20 B. & S. Ga.
- No. 711—Rope, plain, round.
- No. 712—Rope, round, Beaded pattern, long twist.
- No. 713—Rope, round, Fancy pattern.
- No. 714—Rope, round, Plain Diamond pattern.
- No. 719—Square, Oriental pattern, $\frac{3}{4}$, $\frac{7}{8}$ and 1 in. O. D.
- *No. 721—Hexagon, English pattern, $\frac{3}{4}$ in. O. D., 20 B. & S. Ga.
- No. 723—Square, English pattern, $\frac{5}{8}$, $\frac{3}{4}$, $\frac{7}{8}$ and 1 in. O. D.
- No. 726—Round, Diamond Beaded pattern.
- No. 727—Round, Beaded pattern.
- No. 737—Round, Fancy pattern, $\frac{3}{8}$, $\frac{7}{16}$, $\frac{1}{2}$ and $\frac{5}{8}$ in. O. D.
- No. 738—Square, triple fluted corners, $\frac{3}{4}$, $\frac{7}{8}$, $\frac{15}{16}$, $\frac{31}{32}$, .888, .895 and $\frac{1}{2}$ in.
- No. 739—Square, single fluted corners, 1, $1\frac{1}{8}$ and $1\frac{1}{4}$ in. O. D.
- No. 741—Rope, round, plain.
- No. 745—Square, fluted panels, $\frac{1}{2}$, $\frac{5}{8}$ and $\frac{3}{4}$ in. O. D.
- No. 746—Square, single fluted corners, $\frac{1}{2}$, $\frac{5}{8}$, $\frac{3}{4}$ and $2\frac{1}{8}$ in. O. D.
- No. 764—Square, fluted corners and panels, $\frac{15}{16}$ in. O. D.
- No. 765—Octagon, fluted corners, $\frac{15}{16}$ in. O. D.
- *No. 766—Rope, round, fancy fluted, $\frac{3}{4}$ in. O. D., 20 B. & S. Ga.
- No. 768—Square, single fluted corners, 1 and $1\frac{3}{8}$ in. O. D.
- No. 770—Rope, round, narrow Beaded Diamond pattern.
- No. 772—Rope, round, Fancy Diamond pattern.
- No. 774—Rope, round, wide Beaded Diamond pattern.
- No. 775—Rope, round, Fancy pattern.
- No. 776—Rope, round, Fancy pattern.
- No. 778—Rope, round, plain.



U.T. HUNGERFORD



BRASS & COPPER CO.

STAR ★ BRAND

FANCY PATTERN BRAZED BRASS TUBING

When Ordering Please State Both Number and Name of Pattern Desired

See Opposite Page
for Names

And Descriptive
Data



U.T. HUNGERFORD



BRASS & COPPER CO.

U.T. HUNGERFORD BRASS & COPPER CO.

STAR ★ BRAND

SEAMLESS BRASS AND COPPER TUBING

The Following Sizes Are Carried in Our Warehouse Stock Ready for Immediate Shipment

**HARD DRAWN SEAMLESS
BRASS TUBING**

In 12-Ft. Exact Lengths
Except as noted below

**HARD DRAWN SEAMLESS
COPPER TUBING**

In 12-Ft. Exact Lengths

**HARD DRAWN SEAMLESS
COPPER TUBING**

Coppersmith Sizes

Wall Thickness Stubbs Gauge	OUTSIDE Diameter in Inches	Weight in Pounds Per Foot
No. 21	1/8"	.034
No. 21	3/16"	.057
No. 20	1/4"	.087
No. 20	5/16"	.112
No. 19	3/8"	.162
No. 19	7/16"	.192
No. 18	1/2"	.256
No. 18	5/8"	.291
No. 18	3/4"	.327
No. 17	7/8"	.464
No. 17	1"	.548
No. 16	1 1/8"	.703
No. 16	1 1/4"	.790
No. 15	1 3/8"	.981
No. 14	1 1/2"	1.24
No. 14	1 3/4"	1.361
No. 14	1 7/8"	1.48
No. 13	2"	1.819
†No. 11	2 1/4"	2.610
No. 13	2 1/2"	2.094
*No. 16	2 3/4"	1.455
No. 12	2 1/2"	2.70
*No. 16	2 3/4"	1.643
†No. 11	2 1/2"	3.304
No. 12	2 1/2"	3.015
*No. 16	2 3/4"	1.831
No. 12	2 3/4"	3.331
No. 11	3"	3.999
*No. 16	3"	2.207
No. 10	3 1/4"	4.831
No. 10	3 1/2"	5.219
No. 10	4"	5.994

†No. 16 Ga., 2", 2 1/4", 2 1/2" and 3" O. D. are carried in stock in 15-ft. exact lengths only. No. 11 Ga., 2" and 2 1/2" are in 25-ft. lengths only. All other sizes above are in 12-ft exact lengths.

SMALL SIZES SEAMLESS ANNEALED COPPER TUBING

OUTSIDE Diameter in Inches	Wall Thickness Stubbs Gauge	Weight in Pounds Per Ft.
In Straight Lengths of 12 Ft.		
1/8"	No. 21	.0357
3/16"	No. 21	.0598
1/4"	No. 20	.092
5/16"	No. 20	.118
3/8"	No. 19	.170
7/16"	*No. 18	.256
In Coils of About 25 Ft.		
1/8"	†No. 21	.034
3/16"	*†No. 21	.0598
1/4"	*No. 18	.078
5/16"	No. 21	.085
3/8"	†No. 20	.087
7/16"	No. 20	.118
1/2"	No. 19	.170
5/8"	No. 18	.256

* Carried only in our Boston Stock.
† Carried only in our Cleveland Stock.

Wall Thickness Stubbs Gauge	OUTSIDE Diameter in Inches	Weight in Pounds Per Foot
No. 21	1/8"	.0357
No. 21	3/16"	.0598
No. 20	1/4"	.092
No. 20	5/16"	.118
No. 19	3/8"	.170
No. 19	7/16"	.202
No. 18	1/2"	.269
No. 18	5/8"	.306
No. 18	3/4"	.343
No. 17	7/8"	.488
No. 17	1"	.576
No. 16	1 1/8"	.737
No. 16	1 1/4"	.829
No. 15	1 3/8"	1.032
No. 14	1 1/2"	1.30
No. 14	1 3/4"	1.431
No. 14	1 7/8"	1.55
No. 13	2"	1.913
No. 13	2 1/4"	2.202
No. 14	2 1/2"	1.936
No. 10	2 3/4"	3.449
No. 12	2 1/2"	2.839
No. 10	2 3/4"	3.857
No. 12	2 1/2"	3.17
No. 14	2 1/2"	2.44
No. 10	2 3/4"	4.264
No. 12	2 3/4"	3.502
No. 11	3"	4.204
No. 14	3"	2.945
No. 10	3 1/4"	5.079
No. 10	3 1/2"	5.487
No. 14	3 1/2"	3.45
No. 10	3 3/4"	5.895
No. 10	4"	6.302
No. 14	4"	3.955
No. 10	4 1/4"	6.71
No. 10	4 1/2"	7.117
No. 10	4 3/4"	7.525
No. 10	5"	7.932
No. 14	*5"	4.722
No. 10	6"	9.562

* Carried only in our Boston Stock.

SEAMLESS ANNEALED COPPER TUBING

In 20-Ft. Exact Lengths

Wall Thickness Stubbs Gauge	OUTSIDE Diameter in Inches	Weight in Pounds Per Foot
No. 20	1/2"	.197
No. 20	5/8"	.251
No. 20	3/4"	.303
No. 20	1"	.408
No. 20	1 1/4"	.515
No. 20	1 1/2"	.621
No. 20	1 3/4"	.833

§ Carried only in our Baltimore Stock.

Wall Thickness Stubbs Gauge	INSIDE Diameter in Inches	Weight in Pounds Per Foot
In Lengths of 20 Ft.		
No. 14	1 1/4"	1.346
No. 10	1 1/2"	2.664
No. 12	1 1/2"	2.134
No. 14	1 1/2"	1.598
No. 16	1 1/2"	1.238
No. 14	1 3/4"	1.851
No. 16	1 3/4"	1.435
No. 10	2"	3.479
No. 12	2"	2.797
No. 14	2"	2.103
No. 16	2"	1.633
No. 10	2 1/2"	4.294
No. 12	2 1/2"	3.460
No. 14	2 1/2"	2.608
No. 16	2 1/2"	2.028
No. 10	3"	5.109
No. 12	3"	4.123
No. 14	3"	3.113
No. 16	3"	2.424
No. 10	3 1/2"	5.924
No. 12	3 1/2"	4.786
No. 14	3 1/2"	3.618
No. 10	4"	6.739
No. 12	4"	5.449
No. 14	4"	4.123

Wall Thickness Stubbs Gauge	INSIDE Diameter in Inches	Weight in Pounds Per Foot
In Lengths of 12 Ft.		
No. 10	2"	3.479
No. 14	2"	2.103
No. 10	2 1/4"	3.886
No. 10	2 1/2"	4.294
No. 14	2 1/2"	2.608
No. 10	3"	5.109
No. 14	3"	3.113
No. 10	3 1/4"	5.516
No. 10	3 1/2"	5.924
No. 14	3 1/2"	3.618
No. 10	3 3/4"	6.302
No. 10	4"	6.739
No. 14	4"	4.123
No. 10	4 1/4"	7.146
No. 10	4 1/2"	7.554
No. 10	4 3/4"	7.962
No. 10	5 3/4"	9.562

SMALL SIZES SEAMLESS ANNEALED BRASS TUBING

In Straight Lengths of 12 Feet
and Coils of About 25 Feet

OUTSIDE Diameter in Inches	Wall Thickness Stubbs Gauge	Weight in Pounds Per Ft.
In Straight Lengths of 12 Ft.		
1/4"	No. 20	.087
3/16"	No. 20	.112
In Coils of About 25 Ft.		
3/16"	No. 21	.057

**Ready for Immediate Shipment From
Warehouse Stock**



Compression
Union Ell
No. 5



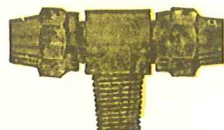
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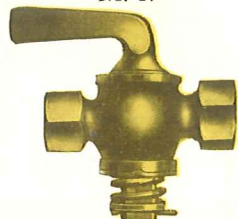
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Union No. 4



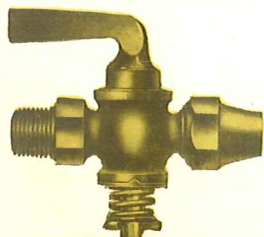
Double Flared
Union
No. 11



Flared
Union Tee
No. 17



Spring Key and Lock Washer
Gasoline Shut-off Cock No. 28EF



Spring Key and Lock Washer
Gasoline Shut-off Cock No. 850

UNIONS—No. 1, $\frac{3}{8}$ ", $\frac{3}{16}$ ", $\frac{1}{4}$ ", $\frac{5}{16}$ " and $\frac{3}{8}$ ".
COUPLINGS—No. 3, $\frac{1}{8}$ ", $\frac{3}{16}$ ", $\frac{1}{4}$ ", $\frac{5}{16}$ " and $\frac{3}{8}$ ".
NIPPLES—No. 4, $\frac{1}{8}$ ", $\frac{3}{16}$ ", $\frac{1}{4}$ ", $\frac{5}{16}$ " and $\frac{3}{8}$ ".
ELBOWS—No. 5, $\frac{1}{8}$ ", $\frac{3}{16}$ ", $\frac{1}{4}$ ", $\frac{5}{16}$ " and $\frac{3}{8}$ "; No. 6, $\frac{1}{8}$ ", $\frac{3}{16}$ ", $\frac{1}{4}$ ", $\frac{5}{16}$ " and $\frac{3}{8}$ "; No. 10, $\frac{1}{8}$ ", $\frac{3}{16}$ ", $\frac{1}{4}$ ", $\frac{5}{16}$ " and $\frac{3}{8}$ ".
TEES—No. 7, $\frac{3}{16}$ ", $\frac{1}{4}$ ", $\frac{5}{16}$ " and $\frac{3}{8}$ "; No. 8, $\frac{3}{16}$ ", $\frac{1}{4}$ ", $\frac{5}{16}$ " and $\frac{3}{8}$ "; No. 9, $\frac{1}{8}$ ", $\frac{3}{16}$ ", $\frac{1}{4}$ ", $\frac{5}{16}$ " and $\frac{3}{8}$ ".
NUTS— $\frac{1}{8}$ ", $\frac{3}{16}$ ", $\frac{1}{4}$ ", $\frac{5}{16}$ " and $\frac{3}{8}$ ".
SLEEVES— $\frac{1}{8}$ ", $\frac{3}{16}$ ", $\frac{1}{4}$ ", $\frac{5}{16}$ " and $\frac{3}{8}$ ".
SPRING CHECK VALVES—No. 2, $\frac{1}{8}$ ", $\frac{3}{16}$ ", $\frac{1}{4}$ ", $\frac{5}{16}$ " and $\frac{3}{8}$ ".

DOUBLE FLARED UNION—No. 11, $\frac{3}{16}''$, $\frac{1}{4}''$, $\frac{5}{16}''$ and $\frac{3}{8}''$.
 FLARED UNION, MALE PIPE THREAD—No. 12, $\frac{3}{16}'' \times \frac{1}{8}''$, $\frac{1}{4}'' \times \frac{1}{8}''$, $\frac{5}{16}'' \times \frac{1}{8}''$ and $\frac{3}{8}'' \times \frac{1}{4}''$.
 FLARED UNION, FEMALE PIPE THREAD—No. 13, $\frac{3}{16}'' \times \frac{1}{8}''$, $\frac{1}{4}'' \times \frac{1}{8}''$, $\frac{5}{16}'' \times \frac{1}{8}''$ and $\frac{3}{8}'' \times \frac{1}{4}''$.
 FLARED ELBOWS, MALE PIPE THREAD—No. 14, $\frac{3}{16}'' \times \frac{1}{8}''$, $\frac{1}{4}'' \times \frac{1}{8}''$, $\frac{5}{16}'' \times \frac{1}{8}''$ and $\frac{3}{8}'' \times \frac{1}{4}''$.
 DOUBLE FLARED ELBOW—No. 15, $\frac{3}{16}''$, $\frac{1}{4}''$, and $\frac{5}{16}''$.
 FLARED TEE—No. 16, $\frac{1}{8}'' \times \frac{1}{8}'' \times \frac{1}{8}''$, $\frac{3}{16}'' \times \frac{3}{16}'' \times \frac{1}{8}''$, $\frac{1}{4}'' \times \frac{1}{4}'' \times \frac{1}{8}''$, $\frac{5}{16}'' \times \frac{5}{16}'' \times \frac{1}{8}''$ and $\frac{3}{8}'' \times \frac{3}{8}'' \times \frac{1}{4}''$. No. 17, $\frac{3}{16}'' \times \frac{3}{16}'' \times \frac{1}{8}''$, $\frac{1}{4}'' \times \frac{1}{4}'' \times \frac{1}{8}''$, $\frac{5}{16}'' \times \frac{5}{16}'' \times \frac{1}{8}''$ and $\frac{3}{8}'' \times \frac{3}{8}'' \times \frac{1}{4}''$. No. 18, $\frac{3}{16}''$, $\frac{1}{4}''$, $\frac{5}{16}''$ and $\frac{3}{8}''$.

STRAIGHT, SHORT—No. 502, $\frac{1}{8}$ I.P.S. $\frac{5}{8}$ " Cup; No. 506, $\frac{1}{4}$ I.P.S. $\frac{5}{8}$ " Cup; No. 500, $\frac{1}{8}$ I.P.S. $\frac{1}{2}$ " Cup; No. 504, $\frac{1}{4}$ I.P.S. $\frac{1}{2}$ " Cup.
STRAIGHT, LONG—No. 501, $\frac{1}{8}$ I.P.S. $\frac{1}{2}$ " Cup; No. 505, $\frac{1}{4}$ I.P.S. $\frac{1}{2}$ " Cup
No. 503, $\frac{1}{8}$ I.P.S. $\frac{5}{8}$ " Cup; No. 507, $\frac{1}{4}$ I.P.S. $\frac{5}{8}$ " Cup.
ANGLE, SHORT—No. 550, $\frac{1}{8}$ I.P.S. $\frac{5}{8}$ " Cup; No. 552, $\frac{1}{4}$ I.P.S. $\frac{5}{8}$ " Cup.
ANGLE LONG—No. 551, $\frac{1}{8}$ I. P. $\frac{5}{8}$ " Cup; No. 553, $\frac{1}{4}$ I. P. S., $\frac{5}{8}$ " Cup.

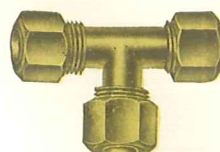
1 8''	No. 6
1 4''	"	7	.	.	13
3 4''	"	.	8	.	..	14	..	24	42
3 8''	"	.	.	9	21	..	25
1 2''	"

No. 600, $\frac{1}{8}''$; No. 601, $\frac{1}{4}''$; No. 602, $\frac{3}{8}''$; No. 603, $\frac{1}{2}''$.

DOUBLE MALE, No. 800 $1\frac{1}{8}$ ", No. 801 $1\frac{1}{4}$ ", No. 802 $3\frac{5}{8}$ "
DOUBLE FEMALE, No. 817 $1\frac{1}{8}$ ", No. 818 $1\frac{1}{4}$ ", No. 819 $3\frac{5}{8}$ "
COMPRESSION UNION AND MALE THREAD
No. 27 E.F. $1\frac{1}{4}$ "x $1\frac{1}{8}$ ", No. 29 E.F. $\frac{5}{8}$ "x $1\frac{1}{4}$ ", No. 57 E.F. $3\frac{5}{8}$ "x $1\frac{1}{4}$ "
BRAZING UNION AND MALE THREAD
No. 806 $1\frac{1}{4}$ "x $1\frac{1}{8}$ ", No. 807 $\frac{5}{8}$ "x $1\frac{1}{8}$ ", No. 809 $3\frac{5}{8}$ "x $1\frac{1}{4}$ "
DOUBLE FLARED, S.A.E.
No. 28 $1\frac{1}{4}$ "x $1\frac{1}{4}$ ", No. 30 $\frac{5}{16}$ "x $\frac{5}{16}$ ", No. 58 $3\frac{5}{8}$ "x $3\frac{5}{8}$ "
DOUBLE COMPRESSION, E.F.
No. 28 $1\frac{1}{4}$ "x $1\frac{1}{4}$ ", No. 30 $\frac{5}{16}$ "x $\frac{5}{16}$ ", No. 58 $3\frac{5}{8}$ "x $3\frac{5}{8}$ "
DOUBLE BRAZING, No. 823 $1\frac{1}{4}$ "x $1\frac{1}{4}$ ", No. 824 $\frac{5}{8}$ "x $\frac{5}{16}$ ", No. 825 $3\frac{5}{8}$ "x $3\frac{5}{8}$ "
MALE AND FEMALE THREAD
No. 812 $1\frac{1}{8}$ "x $1\frac{1}{8}$ ", No. 813 $1\frac{1}{4}$ "x $1\frac{1}{4}$ ", No. 814 $3\frac{5}{8}$ "x $3\frac{5}{8}$ "
FLARED UNION AND MALE THREAD No. 850
 $1\frac{1}{4}$ "x $1\frac{1}{8}$ " $\frac{5}{8}$ "x $\frac{5}{8}$ " $\frac{5}{8}$ "x $1\frac{1}{4}$ " $3\frac{5}{8}$ "x $1\frac{1}{4}$ "



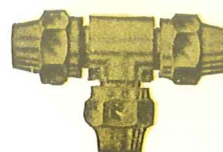
Compression
Union Ell
No. 10



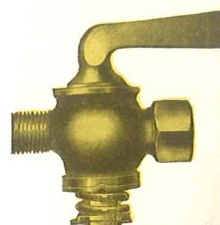
Compression
Union Tee No. 9



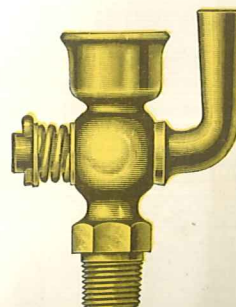
Compression
Union Tee
No. 8



Flared
Union Tee
No. 18



Spring Key and Lock Washer
Gasoline Shut-off Cock No. 812



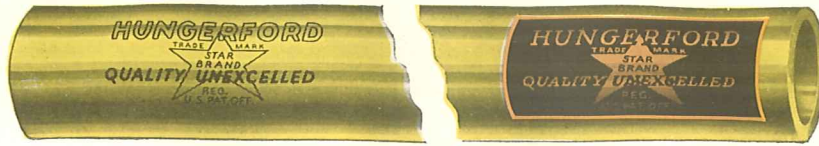
Straight Short
Priming Cup No. 500

U.T. HUNGERFORD



BRASS & COPPER CO.

Every Length
Labeled and
Branded as Our
Guarantee of
Quality.



Every Length
Tested to
1,000 Lbs.
Hydrostatic
Pressure.

STAR ★ BRAND

SEAMLESS BRASS AND COPPER PIPE

12-FT. EXACT LENGTHS—PLAIN ENDS—STANDARD IRON PIPE SIZES

The Following Sizes are Carried in Our Warehouse Stock Ready for Immediate Shipment

BRASS				COPPER		Actual OUTSIDE Diameter in Inches	Actual INSIDE Diameter in Inches	Approx. Weight in Pounds Per Ft.		Approx. Total Weight in Pounds Per 12-Ft. Length	
Regular Temper	Annealed	Regular Temper Nickel Plated	Regular Temper Tinned	Hard	Soft			Brass	Copper	Brass	Copper
1/8	1/8			1/8	1/8	.405	.281	.246	.259	2.952	3.108
1/4	1/4			1/4	1/4	.540	.375	.437	.460	5.244	5.520
3/8	3/8			3/8	3/8	.675	.494	.612	.643	7.344	7.716
1/2	1/2			1/2	1/2	.840	.625	.911	.957	10.932	11.484
3/4	3/4			3/4		1.05	.822	1.24	1.30	14.88	15.60
1	1			1		1.315	1.062	1.74	1.83	20.88	21.96
1 1/4				1 1/4		1.66	1.368	2.56	2.69	30.72	24.48
1 1/2				1 1/2		1.90	1.600	3.04	3.20	36.48	38.40
2				2		2.375	2.062	4.02	4.23	48.24	50.76
2 1/2				2 1/2		2.875	2.500	5.83	6.14	69.96	73.68
3				3		3.50	3.062	8.31	8.75	99.77	105.00
3 1/2						4.00	3.500	10.85	11.41	130.20	136.92
4				4		4.50	4.000	12.29	12.94	147.48	155.28
5						5.563	5.062	15.40	16.21	184.80	194.52
6						6.625	6.125	18.44	19.41	221.28	232.92

EXTRA HEAVY

I. P. S. BRASS PIPE

In 12-Ft. Exact Lengths.

Regular Temper	Actual OUTSIDE Diameter in Inches	Actual INSIDE Diameter in Inches	Approx. Weight in Pounds Per Ft.	Approx. Total Weight in Pounds Per 12-Ft. Length
1/4	.540	.294	.593	7.116
3/8	.675	.421	.805	9.66
1/2	.840	.542	1.19	14.28
3/4	1.050	.736	1.62	19.44
1	1.315	.951	2.39	28.68
1 1/4	1.660	1.272	3.30	39.60
1 1/2	1.900	1.494	3.99	47.88
2	2.375	1.933	5.51	66.12
2 1/2	2.875	2.315	8.41	100.92
3	3.500	2.892	11.24	134.88
4	4.500	3.818	16.41	196.92

FINE THREAD SEAMLESS BRASS

*PLUMBERS' TUBE

12-Ft. Exact Lengths Plain Ends

Plain Finish	Nickel Plated	Actual OUTSIDE Diameter in Inches	Actual INSIDE Diameter in Inches	Approx. Weight in Lbs. Per Ft.	Approx. Total Weight 12-Ft. Length
*5/8	*5/8	.654	.521	.452	5.424
*3/4	*3/4	.768	.631	.554	6.648
*7/8		.875	.728	.682	8.184

*Fine Thread Brass Plumbers' Tube
is carried only in our Boston stock.

ADDITIONAL DATA ON I. P. S. SEAMLESS BRASS AND COPPER PIPE

Iron pipe sizes.....	1/8	1/4	3/8	1/2	3/4	1	1 1/4	1 1/2	2	2 1/2	3	3 1/2	4	4 1/2	5	6	7	8	9	10
REGULAR WEIGHT																				
Exact thickness of walls in inches.....	.064	.083	.096	.1075	.114	.126	.146	.150	.157	.188	.219	.250	.250	.250	.250	.250	.283	.322	.340	.370
Theoretical safe working pressure.																				
Factor safety "6":																				
Brass.....	1776	1465	1160	1024	840	750	628	580	509	518	461	449	427	412	400	375	366	357	349	340
Copper.....	1332	1102	870	798	630	563	471	435	381	391	346	337	320	309	300	281	275	267	261	255
Internal area cross section.....	.057	.104	.192	.305	.533	.863	1.496	2.038	3.355	4.783	7.388	9.887	12.730	15.940	19.990	28.890	38.740	50.040	63.630	78.840
Thickness of walls at bottom of thread.....	.036	.040	.043	.048	.052	.059	.065	.070	.079	.096	.109	.118	.129	.139	.151	.172	.193	.214	.236	.258

NOTE.—Weights are in pounds, diameters and thicknesses in inches, areas in square inches. The safe working pressure is calculated on thickness of walls at bottom of thread and indicates pounds per square inch internal pressure. These weights are theoretically correct, but variations must be expected in practice.

U.T. HUNGERFORD BRASS & COPPER CO.

COPPER RANGE BOILERS

Ready For Immediate Shipment From Our Warehouse Stock

HUNGERFORD B-90 IMPROVED COPPER RANGE BOILERS

30, 40, 50, 60, 80, 100 Gallons Capacity; 200 and 250 Lbs. Test Pressure.

DIMENSIONS

30-Gal. 12" x 61½"
40 " 14" x 62"

50-Gal. 16" x 61"
60 " 17" x 62"

80-Gal. 20" x 62"
100 " 20" x 78"

Test and safe working pressures are clearly die stamped on each Hungerford B-90 Improved Copper Range Boiler, before it leaves the factory.

The street pressure in most localities, rarely exceeds 60 lbs.; more often it is not over 30 to 40 lbs. Therefore, a 200 lb. test provides for a wide margin of safety. Where the street pressure exceeds 85 lbs., a 250 or 300 lb. test boiler should be used.

The customary rule is that the street pressure must not be greater than 42½% of the test pressure stamped on the boiler and we recommend that this rule be strictly adhered to.

Our B-90 Improved Copper Range Boilers embody several new and distinctly advantageous features of construction.

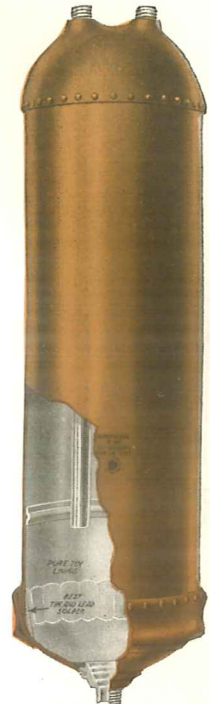
The weakest point in a Copper Range Boiler is usually the bottom seam. The sharp bend in the metal required to form the joint for a floated bottom boiler, strains and weakens the Copper; the ultimate result is usually a leak.

Hungerford B-90 Improved Copper Range Boilers have *dome bottoms* and heads which *telescope* over the shell. The shell is not turned up; neither is the top edge of the *dome bottom* turned over; consequently, there is no strain whatever on any part of the boiler proper.

The *dome bottom* is joined to the shell by means of a spun Copper *reinforcing* band, the top edge of which is just slightly turned over to meet the shell and then firmly riveted in place. The rivets pass through three thicknesses of Copper; the *dome bottom*, shell and reinforcing band.

The reinforcing band also serves as a "rest" or base for the iron stand and eliminates any possibility of galvanic action or wear through friction between the boiler and its supporting stand.

Sturdy Brass Reinforcing Rings are fixed at frequent intervals inside of the shell.



Hungerford B-90
Copper Range Boiler

BRASS BOILER COUPLINGS

30, 40, 50 and 60-Gallon Boilers carried in our New York stock, have ¾ I. P. S. Male Thread Couplings, two bent and two straight. Can also furnish ½ I. P. S. Female or ¾ Fine Thread Female when specifically requested.

30, 40, 50 and 60-Gallon Boilers carried in our Boston stock have ½ I. P. S. Female Thread Couplings, two bent and two straight. Can also furnish ¾ I. P. S. Male or ¾ Fine Thread Female when specifically requested.

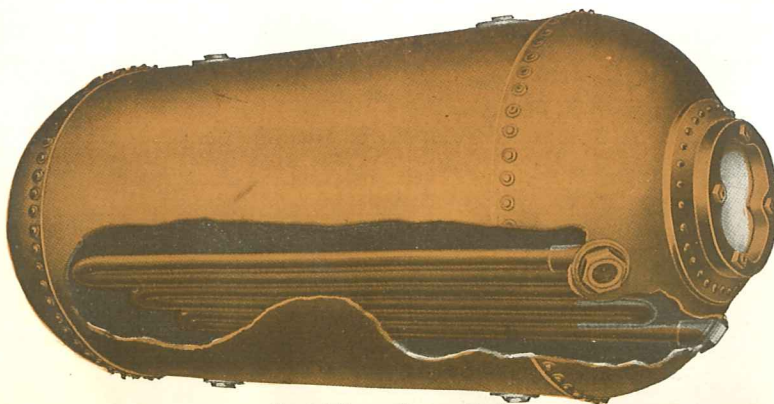
80 and 100-Gallon Boilers in both New York and Boston stock, have ¾ I. P. S. Female Thread Couplings, two bent and two straight. Can also furnish 1 I. P. S. Male Thread when specifically requested.

"HI-LO" AND "THERMOSTAT" TAPPINGS

Can be furnished to special order with or without side couplings, on any size boiler.

IRON BOILER STANDS

Carried in stock ready to ship for regulation 30 and 40 gallon, Hungerford B-90 Copper Range Boilers. (Can also furnish on two or three days' notice, stands for 50, 60, 80 and 100-gallon, vertical type Boilers).



Special Copper Storage Tank

CISTERN PRESSURE COPPER RANGE BOILERS AND HOT WATER STORAGE TANKS

Furnished promptly to special order in any required pressure and capacity.

Storage Tanks with either hand hole or man hole, with or without steam coil and with special tapings, according to conditions under which the tank is to be installed. A detailed sketch, showing exact requirements, will facilitate handling of orders or inquiries.

U.T. HUNGERFORD BRASS & COPPER CO.

STAR ★ BRAND

BRASS PIPE FITTINGS IRON PIPE SIZES

Ready For Immediate Shipment From Our Warehouse Stock

MALLEABLE PATTERN NICKEL PLATED BRASS FITTINGS

90° ELBOWS	REDUCING ELBOWS	45° ELBOWS	CLOSE NIPPLES
$\frac{1}{4}$, $\frac{3}{8}$, $\frac{1}{2}$, $\frac{3}{4}$ and 1, I. P. S.	$\frac{1}{2} \times \frac{3}{8}$, I. P. S.	$\frac{3}{8}$, $\frac{1}{2}$, $\frac{3}{4}$ and 1, I. P. S.	*2 I. P. S.
TEES	REDUCING COUPLINGS	COUPLINGS	
$\frac{3}{8}$, $\frac{1}{2}$, $\frac{3}{4}$, 1, I. P. S.	* $\frac{1}{2} \times \frac{3}{8}$ I. P. S.	$\frac{3}{8}$, $\frac{1}{2}$, $\frac{3}{4}$, 1, I. P. S.	

ROUGH BRASS FITTINGS CAST IRON PATTERN

90° ELBOWS	TEES
$\frac{3}{8}$... $\frac{1}{2}$... $\frac{3}{4}$...1... $1\frac{1}{4}$... $1\frac{1}{2}$...2...I. P. S.	$\frac{3}{8}$... $\frac{1}{2}$... $\frac{3}{4}$...1... $1\frac{1}{4}$... $1\frac{1}{2}$...2...I. P. S.
COUPLINGS	UNIONS, EXTRA HEAVY
$\frac{3}{8}$... $\frac{1}{2}$... $\frac{3}{4}$...1... $1\frac{1}{4}$... $1\frac{1}{2}$...2...I. P. S.	$\frac{1}{4}$... $\frac{3}{8}$... $\frac{1}{2}$... $\frac{3}{4}$...1... $1\frac{1}{4}$... $1\frac{1}{2}$...2...I. P. S.

ACID METAL FITTINGS FOR USE WITH SEAMLESS COPPER PIPE

Made to order very promptly in any style and size required, from a special acid-resisting alloy guaranteed to contain absolutely no zinc whatever, or other metal having any greater tendency to dissolve or disintegrate from contact with acids or pickling solutions than pure copper itself. Our Acid Metal Fittings have been in use for years and with very marked success in Steel Mills, Pulp and Paper Mills, in Coal Mines where sulphur charged water has to be handled, and in many other industries where steam or water lines come in contact directly or indirectly with acid fumes or acid baths as well as for conveying acid solutions, etc.

GROUND JOINT BRASS UNIONS

SEMI-FINISHED

With Hex. Nut and Round Ends

$\frac{1}{8}$... $\frac{1}{4}$... $\frac{3}{8}$... $\frac{1}{2}$... $\frac{3}{4}$...1... $1\frac{1}{4}$... $1\frac{1}{2}$...2... $2\frac{1}{2}$...3...I. P. S.
--

SEMI-FINISHED

Special Street Pattern

* $\frac{1}{8}$ and * $\frac{1}{4}$ I. P. S.

POLISHED

With Octagon Nut and Ends

$\frac{1}{8}$ I. P. S.

BRASS STEAM GAUGE SYPHONS

$\frac{1}{4}$, I. P. S. No. 1

*FINE THREAD BRASS PIPE FITTINGS

Acorns: $\frac{3}{4}$ F. T.	Caps: $\frac{3}{4}$ F.T.
Bushings: $\frac{3}{4}$ F.T.x $\frac{3}{8}$ I.P.S. and $\frac{3}{4}$ F.T.x $\frac{3}{4}$ I.P.S.	Reducing Couplings: $\frac{3}{4}$ F.T.x $\frac{3}{8}$, $\frac{1}{2}$ and $\frac{3}{4}$ I.P.S.
Couplings: $\frac{3}{4}$ F.T. and $\frac{3}{4}$ F.T., R. & L.	Drop Elbows: $\frac{3}{4}$ F.T. and $\frac{3}{4}$ F.T.x $\frac{1}{2}$ I.P.S.
90° Elbows: $\frac{3}{4}$ F.T., $\frac{3}{4}$ F.T.x $\frac{1}{2}$ I.P.S. and $\frac{3}{4}$ F.T.x $\frac{3}{8}$ F.T.	Close Nipples: $\frac{3}{4}$ F.T.
45° Elbows: $\frac{3}{4}$ F.T.	Drop Tees $\frac{3}{4}$ F.T.x $\frac{1}{2}$ I.P.S.
Close Return Bends: $\frac{3}{4}$ F.T.	Unions: $\frac{3}{4}$ F.T., $\frac{3}{4}$ F.T.x $\frac{3}{4}$, $\frac{1}{2}$ and $\frac{3}{8}$ I.P.S.
Single Bar Drop Tees: $\frac{3}{4}$ F.T.	
Tees: $\frac{3}{4}$ F.T., $\frac{3}{4}$ F.T.x $\frac{1}{2}$ and $\frac{3}{8}$ I.P.S., $\frac{3}{4}$ F.T.x $\frac{3}{8}$ I.P.S.x $\frac{3}{4}$ F.T., $\frac{3}{4}$ F.T.x $\frac{1}{2}$ I.P.S.x $\frac{3}{4}$ F.T. and $\frac{1}{2}$ I.P.S.x $\frac{3}{4}$ F.T.	

*PLUMBING SUPPLIES

Flush Pipes—Offset and Straight, $1\frac{1}{4}$ " and $1\frac{1}{2}$ " O. D.
Straight Basin Wastes—With P. O. Plugs, $1\frac{1}{4}$ ".
Slip Joint Ells— $1\frac{1}{4}$ " x 4", Bond.
N. P. Connected Wastes and Overflows—No. 8, $1\frac{3}{8}$ and No. 22 Reg.
Brass Ferrules—Hub and Standard No. 4, 4" x 5".
" " Extra Heavy No. 0-8, 2" x $1\frac{1}{2}$ " x 4".
" " " Taper No. 8, 2" x 2" x 4".
" " " No. 6, 2" x 4".
Copper Ball Floats—12 oz., 5".
Tin Oilers—No. 20.

* Carried only in our Boston Warehouse Stock.

NICKEL PLATED

*FINE THREAD BRASS PIPE FITTINGS

Couplings: $\frac{3}{4}$ F.T.x $\frac{1}{2}$ I.P.S.
Drop Elbows: $\frac{3}{4}$ F.T.x $\frac{1}{2}$ F.T.
90° Elbows: $\frac{3}{4}$ F.T.
Tees: $\frac{3}{4}$ F.T. and $\frac{3}{4}$ F.T.x $\frac{3}{8}$ I.P.S.x $\frac{3}{4}$ F.T.

SEAMLESS COPPER FLUE FERRULES

$\frac{1}{16}$ " thick, $\frac{5}{8}$ " wide, $1\frac{3}{4}$ ", $1\frac{7}{8}$ " and 2" inside diameter.
 $\frac{1}{16}$ " " $\frac{3}{4}$ " " $1\frac{7}{8}$ " and 2" inside diameter.
 $\frac{1}{32}$ " " $\frac{5}{8}$ " " 2" inside diameter.

U.T. HUNGERFORD BRASS & COPPER CO.

STAR ★ BRAND

COPPER ROOFING ACCESSORIES

Ready For Immediate Shipment From Our Warehouse Stock

As our guarantee of full weight, standard quality material, every length of genuine "Star Brand" Copper Leader and every "Star Brand" Copper Elbow and Leader Shoe, is clearly and indelibly die stamped with our name, brand and the *net* weight of Hungerford "Star Brand" Cold Rolled Sheet Copper from which it is made.

ROUND, PLAIN COPPER LEADER

16 Oz.; 10 Ft. Lengths; 2"; *2½"; 3"; 4"; 5" Diameter
14 Oz.; 10 Ft. " ½2"; ½3"; ½4" "

ROUND, CORRUGATED COPPER LEADER

16 Oz.; 10 Ft. Lengths; 2"; 3"; 4"; 5"; 6" Diameter
14 Oz.; 10 Ft. " ½2"; ½3"; ½4" "

SQUARE, CORRUGATED COPPER LEADER

16 Oz.; 10 Ft. Lengths; 2"; 3"; 4"; 5" Diameter
14 Oz.; 10 Ft. " ½2; ½3 "
14 Oz.; 8 Ft. " ½4" "

From long custom, this type of Leader is termed "Square," whereas, in reality, it is *Rectangular* in shape. Sizes carried in our warehouse stock as noted above, are standard. Actual measurement of 2-inch "Square" Corrugated Leader is 1¾" x 2¼", 3-inch, 2⅜" x 3¼", 4-inch, 2¾" x 4¼", 5-inch, 3¾" x 5".

ONE PIECE, ROUND, PLAIN COPPER LEADER ELBOWS

16 Oz.; 45° (No. 1); 2"; 3"; 4"; 5" Diameter
16 Oz.; 60° (No. 2); 2"; 3"; 4"; 5" "
16 Oz.; 75° (No. 3); 2"; 3"; 4"; 5" "

ONE PIECE, ROUND, CORRUGATED COPPER LEADER ELBOWS

16 Oz.; 45° (No. 1); 2"; 3"; 4"; 5" Diameter
16 Oz.; 60° (No. 2); 2"; 3"; 4"; 5" "
16 Oz.; 75° (No. 3); 2"; 3"; 4"; 5" "
14 Oz.; 75° (No. 3); *½2"; *½3" "

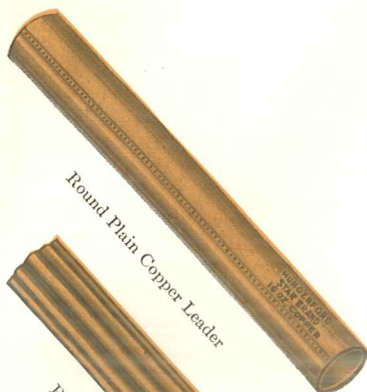
ONE PIECE, SQUARE, CORRUGATED COPPER LEADER ELBOWS STYLE "A"

16 Oz.; 45° (No. 1); 2"; 3"; 4"; 5" Diameter
16 Oz.; 60° (No. 2); 2"; 3"; 4"; 5" "
16 Oz.; 75° (No. 3); 2"; 3"; 4"; 5" "
14 Oz.; 75° (No. 3); ½2"; ½3" "

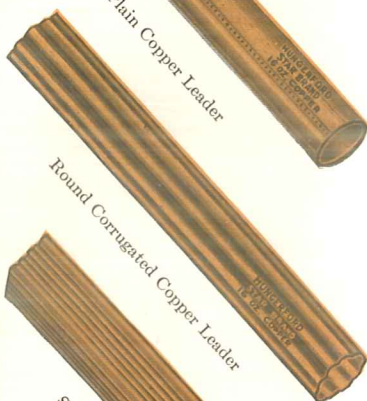
ONE PIECE, SQUARE, CORRUGATED COPPER LEADER ELBOWS STYLE "B"

16 Oz.; 75° (No. 3); 3"; 4" Diameter

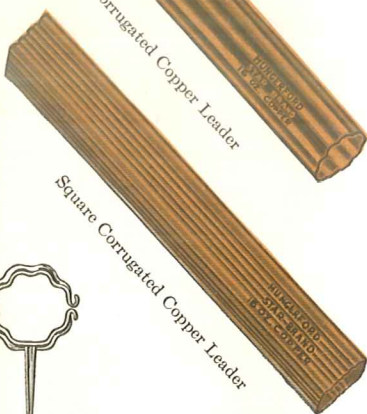
* Carried only in our Boston stock.
† Carried only in our Philadelphia stock.



Round Plain Copper Leader



Round Corrugated Copper Leader



Square Corrugated Copper Leader



Leader Hook



60° Elbow
(No. 2)



75° Elbow
(No. 3)



45° Elbow
(No. 1)



75° Copper Shoe
(No. 3)



"Diamond" Pattern
Copper Shingle



STAR ★ BRAND

COPPER ROOFING ACCESSORIES

Ready For Immediate Shipment From Our Warehouse Stock

ROUND, PLAIN ONE PIECE COPPER LEADER SHOES

16 Oz.; 75° (No. 3); 2"; 3"; 4" Diameter

ROUND, CORRUGATED
ONE PIECE COPPER LEADER SHOES

16 Oz.; 75° (No. 3); 2"; 3"; 4" Diameter

**SQUARE CORRUGATED
ONE PIECE COPPER LEADER SHOES
STYLE "A"**

16 Oz.; 75° (No. 3); 2"; 3"; 4" Diameter
14 Oz.; 75° (No. 3); .. ±3"; ±4" "

ROUND COPPER LEADER STRAPS

Style "B;" For 2"; 3"; 4"; 5" Leaders

SQUARE COPPER LEADER STRAPS

Style "B;" For 2"; 3"; 4"; 5" Leaders

COPPER LEADER STRAP END PIECES

Style "B," Width at base, $1\frac{1}{2}''$; Width over-all, $4\frac{1}{2}''$; Length over-all, $4\frac{1}{2}''$
 " "G," " " " 2", " " 5 " 5
 No. 1029; " " " $2\frac{1}{4}''$, " " $3\frac{1}{4}''$, " " $3\frac{1}{2}''$

STYLE NO. 14, COPPER LEADER HEADS

8" x 5	6	For 2" Plain or Corrugated, Round or Square, Leaders
10" x 6 1/2	8	3" " " " " " "
11" x 7 1/2	8	4" " " " " " "
12" x 8	9 1/2	5" " " " " " "

GALVANIZED LEADER HOOKS

Plain	Round,	Hinged,	Wood Drive,	3" and 4";	Brick Drive,	3" and 4"
Corrugated	"	"	"	3" " 4";	"	3" " 4"
Plain	"	Wired	"	3" " 4";	"	3" " 4"
"	Square	"	"	3" " 4";	"	3" " 4"

ROUND COPPER WIRE LEADER STRAINERS

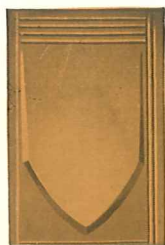
No. 17 Wire; 2" and 3"
No. 16 " 4"
No. 15 " 5" and 6"

SQUARE COPPER WIRE LEADER STRAINERS

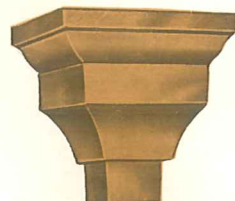
No. 17 Wire; 2" x 3"
 No. 16 " 3" x 4" and 4" x 4"
 No. 14 " 4" x 5"

COPPER SHINGLES AND SPANISH TILE

Copper Shingles and Tile are not carried in our warehouse stock, but patterns illustrated on this and adjoining pages can be furnished promptly to special order. In writing for prices, be sure to specify style desired, type of roof and approximate number of squares to be covered.



Excelsior" Pattern Copper Shingle



Style No. 14
Copper Leader Head



Style "B"
Copper Leader Strap



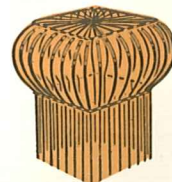
No. 1029
Leader Strap End Piece



Style "G" Leader



Style "B" and Pieces



Copper Leader Strainer



"Classon" Snow Guard

‡ Carried only in our Philadelphia stock.

U.T. HUNGERFORD



BRASS & COPPER CO.

STAR ★ BRAND

COPPER ROOFING ACCESSORIES

Ready For Immediate Shipment From Our Warehouse Stock

Every length of our "Star Brand" Copper Gutter and every "Star Brand" Copper Gutter Mitre is clearly and indelibly die stamped with our name, brand and the full *net* weight of "Star Brand" Cold Rolled Sheet Copper from which it is made.

HALF ROUND, SINGLE BEAD LAP JOINT, COPPER GUTTER

16 Oz.; 10 Ft. Lengths; 4"; 5"; 6" Diameter
14 Oz.; 8 Ft. " " " " " " " "

HALF ROUND, SINGLE BEAD SLIP JOINT, COPPER GUTTER

16 Oz.; 10 Ft. Lengths; $\frac{1}{2}$ 5"; $\frac{1}{2}$ 6" Diameter
14 Oz.; 8 Ft. " " " " " " " "

SPECIAL "OG" COPPER GUTTER

Not carried in stock, but practically any style and size can be furnished promptly from mill. A blue print or detailed sketch, showing exact measurements and specifications of quantity required, should accompany all inquiries.

HALF ROUND, SINGLE BEAD LAP JOINT, COPPER GUTTER MITRES

16 Oz.; 4"; 5"; 6"; Diameter for "Inside" Corners
16 Oz.; 4"; 5"; 6"; "

HALF ROUND, SINGLE BEAD SLIP JOINT, COPPER GUTTER MITRES

16 Oz.; $\frac{1}{2}$ 5"; $\frac{1}{2}$ 6"; Diameter, for "Inside" Corners
16 Oz.; $\frac{1}{2}$ 5"; $\frac{1}{2}$ 6"; "

HALF ROUND, SINGLE BEAD, LAP JOINT COPPER GUTTER END PIECES, WITH OUTLETS ONLY

(End Caps are sold separately)

END PIECES, 10" LONG; OUTLETS, 2½" LONG

16 Oz.; 4" 5" and 6" Dia.; With Outlets for 3" and 4" Round and Square Leaders.

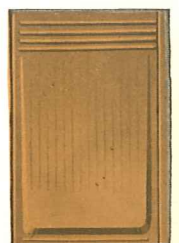
HALF ROUND, SINGLE BEAD, SLIP JOINT COPPER GUTTER END CAPS

16 Oz.; 4"; 5"; 6" Diameter

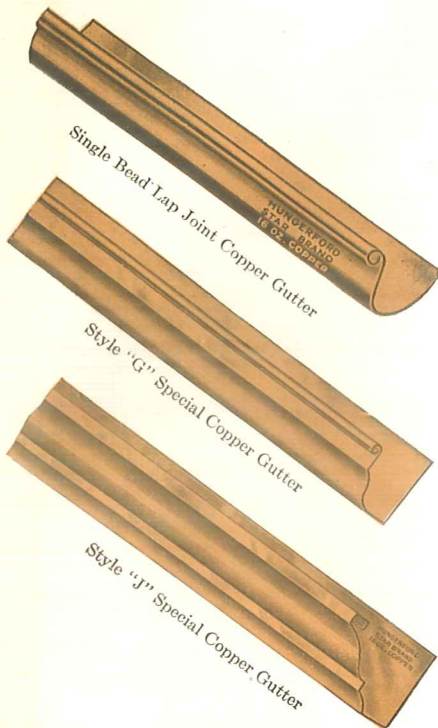
COPPER GUTTER OUTLETS

16 Oz.; 3"; 4" Diameter

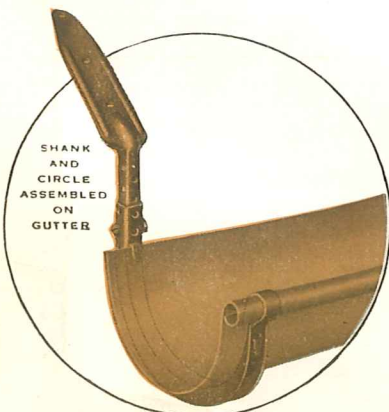
‡Carried only in our Philadelphia stock.



"Corinthian" Pattern Copper Shingle



Monarch Shank, Plate and Circle Copper Gutter Hanger



U.T. HUNGERFORD BRASS & COPPER CO.

STAR ★ BRAND

COPPER ROOFING ACCESSORIES

Ready For Immediate Shipment From Our Warehouse Stock

MONARCH SHANK, PLATE AND CIRCLE GUTTER HANGERS FOR HALF ROUND, SINGLE BEAD, GUTTERS

COPPER; 4"; 5"; 6"; Diameter.
GALVANIZED; 4"; 5"; 6"; " "

"Monarch" Shank, Plate and Circle Gutter Hangers are made in both **pure copper** and galvanized iron.

Pure Copper Fittings should always be used for hanging Copper Gutters. Iron or steel when allowed to come in contact with Copper, set up a **galvanic** action which causes rapid deterioration and results in very unsatisfactory service.

Our "Monarch" Shank, Plate and Circle Gutter Hanger is built on entirely new principles that overcome the limitations and disadvantages of old fashioned **numbered** Shank and Circle Gutter Hangers.

"Monarch" Shanks are adjustable; only **one** type of Shank is required for any pitch of roof.

"Monarch" Plates, for use on fascia boards and overhanging rafters, are **reversible** which permits either right or left fastening; Plates are adjustable up or down, same as the Shanks.

A secure fastening can be made by using the "Monarch" Circle alone, nailing direct to rafter or fascia board. No other type of Circle can be used alone in this manner.

"REX" STRAP GUTTER HANGERS FOR HALF ROUND, SINGLE BEAD, GUTTERS

Copper 4"; 4½"; 5"; 6" Diameter
Galvanized 4"; 4½"; 5"; 6" " "

TINNED GEM CIRCLES FOR HALF ROUND, SINGLE BEAD, GUTTERS

4"; 5"; 6" Diameter

"B. B." TINNED GUTTER SHANKS

Nos. 7, 8, 9, 10, 11, 12

"CLASSON" SNOW GUARDS COPPER AND GALVANIZED FOR NEW AND OLD ROOFS

Approximate number of Snow Guards required per square.

¼ Pitch Roof.....	50	Guards per Square
⅓ " "	75	" " "
½ " "	150	" " "



"Jersey" Pattern
Copper Shingle



Copper Spanish Tile



End Piece, Cap and Outlet



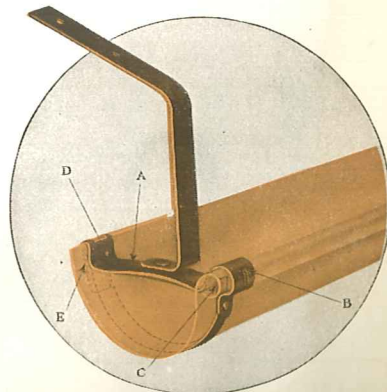
Outlet



Cap



Outside Corner
Copper Gutter Mitre



"Rex" Strap Copper Gutter Hanger

U.T. HUNGERFORD BRASS & COPPER CO.

STAR ★ BRAND

COPPER NAILS AND TACKS

The Following Sizes are Carried in Our Warehouse Stock Ready For Immediate Shipment

STANDARD COPPER WIRE NAILS

Packed in Kegs of 100 Pounds and in 5-Pound Paper Cartons

Stubs Gauge	16	15	14	13	12	11		
Lengths.....	$\frac{5}{8}''$, $\frac{3}{4}''$, $\frac{7}{8}''$	1''	$\frac{3}{4}''$, $\frac{7}{8}''$, $1\frac{1}{4}''$	$1\frac{1}{2}''$	$1\frac{3}{4}''$, 2''	$1\frac{1}{4}''$, $1\frac{1}{2}''$, $2\frac{1}{4}''$		
Stubs Gauge	10	9		8	6	5	4	2
Lengths	2'', $2\frac{1}{2}''$, $2\frac{3}{4}''$	$2\frac{1}{4}''$, 3'', $3\frac{1}{4}''$		$2\frac{1}{2}''$, $3\frac{1}{2}''$	4''	$4\frac{1}{2}''$	5''	6''

† Carried only in our Cleveland Stock.

REGULAR CUT COPPER NAILS

These Nails Correspond in Size with Standard Iron Cut Nails

Packed in Cases of 100 Pounds and in 5-Pound Paper Cartons

Lengths.....	$\frac{5}{8}$ ", $\frac{3}{4}$ ", $\frac{7}{8}$ ", 1", $1\frac{1}{4}$ ", $1\frac{1}{2}$ ", $1\frac{3}{4}$ ", 2", $2\frac{1}{4}$ ", $2\frac{1}{2}$ ", $2\frac{3}{4}$ ", 3", $3\frac{1}{4}$ ", $3\frac{1}{2}$ ", $3\frac{3}{4}$ ", 4", $4\frac{1}{2}$ ", 5", 6"
--------------	---

COPPER WIRE SLATING NAILS

WITH EXTRA LARGE FLAT HEADS

Packed in Kegs of 100 Pounds and in 5-Pound Paper Cartons

Stubs Gauge	12	11	10	$10\frac{1}{2}$
Lengths.....	$\frac{7}{8}$ ", 1", $1\frac{1}{4}$ ", $1\frac{1}{2}$ ", $\frac{1}{2}$ "	$1\frac{1}{4}$ ", $1\frac{1}{2}$ ", $1\frac{3}{4}$ "	$1\frac{1}{4}$ ", $1\frac{1}{2}$ ", $1\frac{3}{4}$ ", 2", $\frac{1}{2}$ ", $\frac{1}{2}$ "	$1\frac{3}{4}$ "

† Carried only in our Philadelphia Stock.

† Carried only in our Cleveland Stock.

* Carried only in our Boston Stock.

COPPER AND YELLOW METAL CUT ROOFING NAILS

WITH EXTRA LARGE FLAT HEADS

Packed in Cases of 100 Pounds and in 5-Pound Paper Cartons

Copper.....	$1\frac{1}{4}$ " and $1\frac{1}{2}$ " long	Yellow Metal	$1\frac{1}{4}$ ", $1\frac{1}{2}$ " and 2" long
-------------	--	-------------------	--

* Carried only in our Boston Stock.

COPPER CLOUT NAILS

Packed in Cases of 100 Pounds and in 5-Pound Paper Cartons

Lengths.....	$\frac{1}{2}$ " $\frac{5}{8}$ " $\frac{3}{4}$ " $\frac{7}{8}$ " 1" $1\frac{1}{8}$ " $1\frac{1}{4}$ " $1\frac{1}{2}$ " $1\frac{3}{4}$ " 2" $2\frac{1}{4}$ " $2\frac{1}{2}$ "
--------------	--

BRASS WIRE BRADS

Packed in 1-Pound Paper Cartons

Stubs Gauge No. 17.....	$\frac{5}{8}$ " and $\frac{3}{4}$ " long	Stubs Gauge No. 18.....	$\frac{5}{8}$ " and $\frac{3}{4}$ " long
-------------------------	--	-------------------------	--

COPPER STORM NAILS AND RIDGE ROLL CLIPS

FOR ASBESTOS AND COMPOSITION SHINGLES AND RIDGE ROLLS

Copper Storm Nails; $\frac{5}{8}$ " Dia. Head; $\frac{3}{4}$ " Long; No. 14 Stubs Ga. Shank

Ridge Roll Clips; $\frac{5}{8}$ " Wide; $3\frac{1}{8}$ " Long; No. 25 Stubs Gauge Thick

COPPER AND YELLOW METAL SHEATHING NAILS

Packed in Bulk and (Copper Only) in 5-Pound Paper Cartons

Copper.....	$\frac{3}{4}$ ", 1", $1\frac{1}{4}$ " Long	Yellow Metal.....	1", $1\frac{1}{4}$ ", $1\frac{1}{2}$ " Long
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OVAL AND FLAT HEAD BRONZE TACKS

Packed in Cases of 100 Pounds and in 5-Pound Paper Cartons

Flat Head.....	$\frac{1}{4}$ " $\frac{3}{8}$ " $\frac{7}{16}$ " $\frac{1}{2}$ " $\frac{5}{8}$ " $1\frac{1}{16}$ " $\frac{3}{4}$ " $\frac{7}{8}$ " 1" $1\frac{1}{8}$ " $1\frac{1}{4}$ " $1\frac{1}{2}$ "
Oval Head.....	..... $\frac{3}{8}$ " $\frac{1}{2}$ " $\frac{5}{8}$ " $\frac{3}{4}$ " $\frac{7}{8}$ " 1" $1\frac{1}{4}$ " $1\frac{1}{2}$ "

COPPER NAILS, TACKS AND BRASS ESCUTCHEON PINS

FLAT HEAD COPPER AND BRONZE TACKS

All lengths $\frac{1}{4}$ " to $1\frac{1}{2}$ "

OVAL HEAD COPPER TACKS



STANDARD COPPER WIRE NAILS All Lengths $\frac{5}{8}$ " to 6" REGULAR CUT COPPER NAILS All Lengths $\frac{5}{8}$ " to 6"

27

U.T. HUNGERFORD BRASS & COPPER CO.

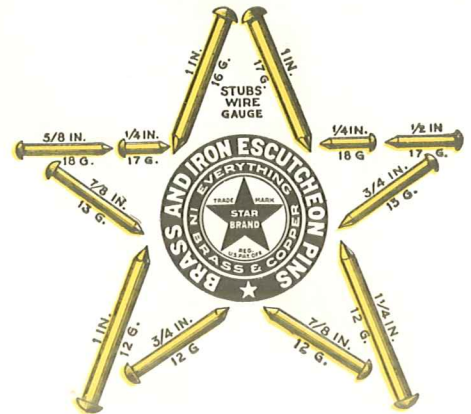
STAR ★ BRAND

BRASS ESCUTCHEON PINS

Ready For Immediate Shipment From Our Warehouse Stock

ROUND HEAD BRASS ESCUTCHEON PINS

Stubs Gauge	Lengths Carried in Stock											
No. 10	3/8"	1/2"	5/8"	3/4"	7/8"	1"	1 1/4"					
" 11	3/8"	1/2"	5/8"	3/4"	7/8"	1"	1 1/4"	1 1/2"	1 3/4"	2"		
" 12	3/8"	1/2"	5/8"	3/4"	7/8"	1"	1 1/4"	1 1/2"	1 3/4"	2"		
" 13	3/8"	1/2"	5/8"	3/4"	7/8"	1"	1 1/4"	1 1/2"	1 3/4"	2"		
" 14	3/8"	1/2"	5/8"	3/4"	7/8"	1"	1 1/4"	1 1/2"	1 3/4"	2"		
" 15	3/8"	1/2"	5/8"	3/4"	7/8"	1"	1 1/4"	1 1/2"	1 3/4"	2"		
" 16	3/8"	1/2"	5/8"	3/4"	7/8"	1"	1 1/4"	1 1/2"	1 3/4"	2"		
" 17	3/8"	1/2"	5/8"	3/4"	7/8"	1"	1 1/4"	1 1/2"	1 3/4"	2"		
" 18	3/8"	1/2"	5/8"	3/4"	7/8"	1"	1 1/4"	1 1/2"	1 3/4"	2"		
" 19	3/8"	1/2"	5/8"	3/4"	7/8"	1"	1 1/4"	1 1/2"	1 3/4"	2"		
" 20	3/8"	1/2"	5/8"	3/4"	7/8"	1"	1 1/4"	1 1/2"	1 3/4"	2"		

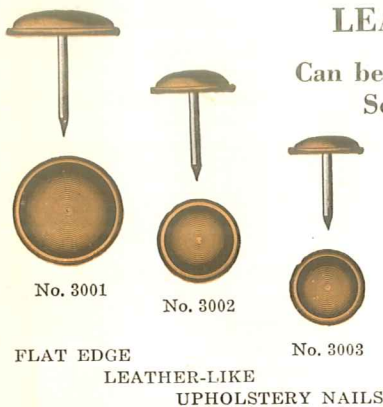


‡Carried only in our Philadelphia Stock. †Carried only in our Cleveland Stock.

Nickel and Silver Plated, Round Head Brass Escutcheon Pins, Barbed Shank Brass Pins, Headless and Special Brass Pins, Iron Escutcheon Pins, and Special Copper or Brass Rivets and Nails of any description furnished promptly to special order.

LEATHER-LIKE UPHOLSTERY NAILS

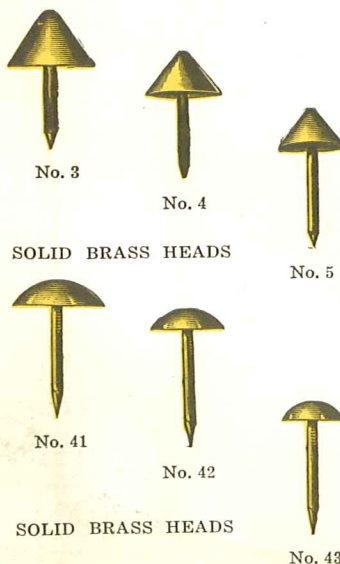
Can be furnished promptly in a wide variety of styles.
Send us samples or detailed specifications of
your requirements.



BRASS UPHOLSTERY NAILS

Solid Brass and Steel Heads
GILT AND NICKEL PLATED
Packed in Boxes of 1000
Illustrations are Actual Size

Styles shown on this page can be furnished promptly from stock in 3/4-in. (Long), 5/8-in. (Medium), and 1/2-in. (Short) lengths. Medium length is usually furnished unless otherwise specified. Can also furnish barbed nails and special sizes and styles to order.

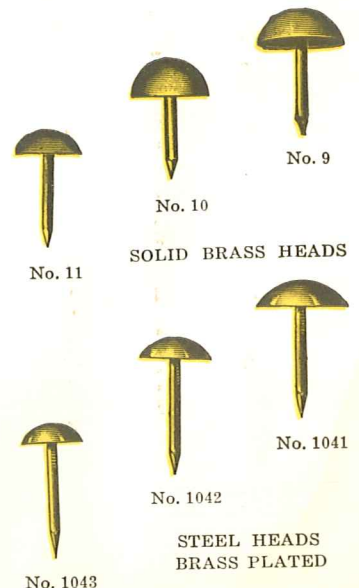


NUMERAL NAILS

Heads are solid Brass and cannot rust.
Numerals are black enamel sunken into heads.

Assortments are as follows:

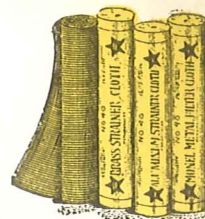
"A" 0 to 24 "C" 50 to 74
"B" 25 to 49 "D" 75 to 99



SOLID BRASS HEADS

STEEL HEADS
BRASS PLATED

U.T. HUNGERFORD BRASS & COPPER CO.



INSECT SCREEN CLOTH

Ready For Immediate Shipment From Our Warehouse Stock

GENUINE BRONZE SCREEN CLOTH

The most serviceable Screening for Windows, Doors and Porches.

Bright Finish; 14, 16 and 18 Mesh; Standard 100 Ft. Rolls; 18", 20", 22", 24", 26", 28", 30", 32", 34", 36", 38", 40", 42", 44", 46", 48" Wide.
Antique Finish; 14 and 16 Mesh; Standard 100 Ft. Rolls; 18", 20", 22", 24", 26", 28", 30", 32", 34", 36", 38", 40", 42", 44", 46", 48" Wide.
Antique Finish; 16 Mesh only; 100 Ft. Rolls; 54", 60", 72" Wide.

PURE COPPER SCREEN CLOTH

Woven from 99.9% Pure Copper Wire.

Bright Finish; 14, 16 and 18 Mesh; Standard 100 Ft. Rolls; 18", 20", 22", 24", 26", 28", 30", 32", 34", 36", 38", 40", 42", 44", 46", 48" Wide.
Bright Finish; 16 Mesh; .015" (29 Ga.) Wire; Standard 100 Ft. Rolls; 24", 28", 30", 32", 36", 42", 48" Wide.

GENUINE MONEL METAL SCREEN CLOTH

Monel Metal is a *natural* alloy of Copper and Nickel.

It has a tensile strength equal to mild steel.

16 Mesh; 35 O. E. Ga. (.009") Wire; Standard 100 Ft. Rolls; 20", 22", 24", 26", 28", 30", 32", 34", 36", 38", 40", 42", 44", 46", 48" Wide.
16 Mesh; .010" Wire; 100 Ft. Rolls; 24", 26", 28", 30", 32", 34", 36" Wide.
18 Mesh; 35 O. E. Ga. (.009") Wire; Standard 100 Ft. Rolls; 24", 26", 28", 30", 32", 34", 36", 38", 40", 42", 44", 46", 48" Wide.
18 Mesh; .010" Wire; Standard 100 Ft. Rolls; 36" Wide.

GALVANIQUE ELECTRO-PLATED SCREEN CLOTH DULL FINISH

12, 14 and 16 Mesh; Standard 100 Ft. Rolls; 18", 20", 22", 24", 26", 28", 30", 32", 34", 36", 38", 40", 42", 44", 46", 48" Wide.

ANTIQUE BRONZE GUARD WIRE CLOTH

3 Mesh; .040" Wire; Any Length up to 100 ft.; 30" and 36" Wide.

BRASS STRAINER CLOTH

Our Brass Strainer Cloth is woven from all new wire.

We do not handle "cleaned" or second grade cloths.

40, 50, 60, 70, 80, 90 and 100 Mesh; 60" Long; 12" Wide.
40, 50 and 60 Mesh; in any required length up to 100 ft.; 36" Wide.

BRASS WIRE CLOTH

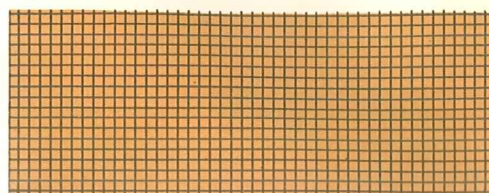
20, 24, 30, 40, 50, 60, 90 and 100 Mesh; any length up to 100 ft.; 36" Wide.

COPPER WIRE CLOTH

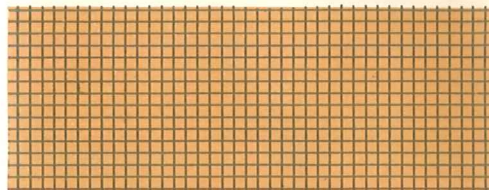
40, 50 and 60 Mesh; in any required length up to 100 ft.; 36" Wide.
2 Mesh (.065" Wire) and 4 Mesh (.049" Wire); any length up to 100 ft.; 30" and 36" Wide.

MONEL METAL WIRE CLOTH

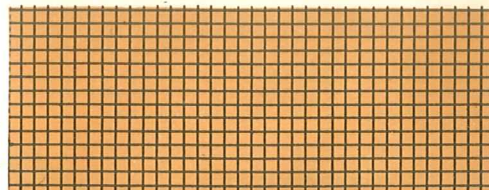
4, 6, 8, 10, 12, 14, 16, 20, 24, 30, 40, 50, 60, 80 and 100 Mesh; in any required length up to 100 ft.; all 36" Wide.



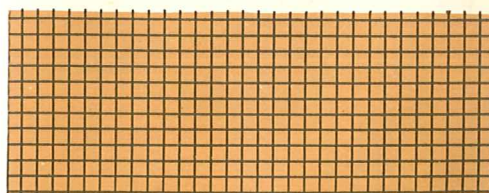
18 Mesh Screen Cloth



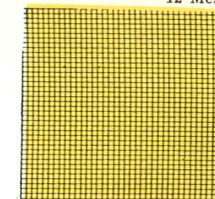
16 Mesh Screen Cloth



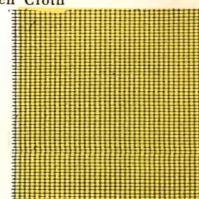
14 Mesh Screen Cloth



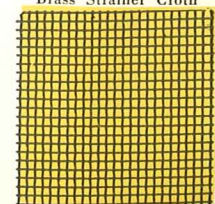
12 Mesh Screen Cloth



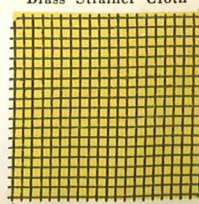
40 Mesh Brass Strainer Cloth



60 Mesh Brass Strainer Cloth



24 Mesh Wire Cloth



20 Mesh Wire Cloth

U.T. HUNGERFORD BRASS & COPPER CO.

STAR ★ BRAND

DRAWN BRASS

WEATHERPROOF

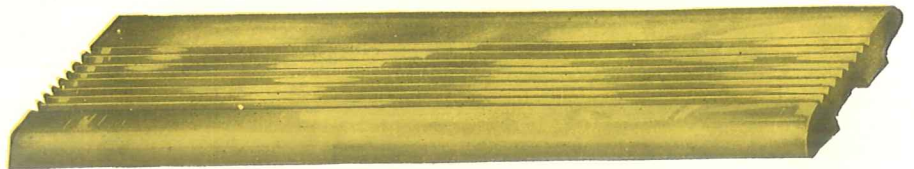
SILL MOULDINGS

COPPER SCREEN DOOR GRILLES AND BRASS ANGLE

Not Carried In Stock But Can Be Furnished Promptly To Special Order



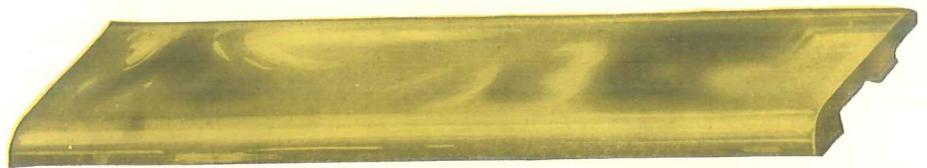
S-3-P
Cross Section
Actual Size



S-3-P Drawn Brass Weatherproof Sill Moulding



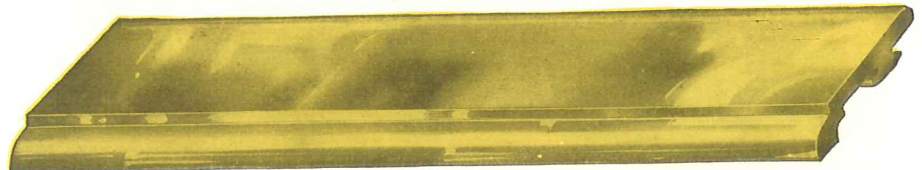
S-1-F
Cross Section
Actual Size



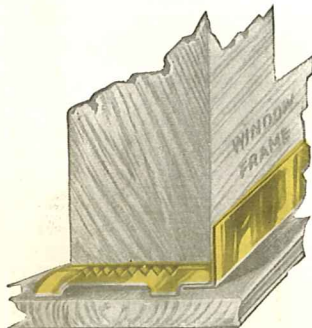
S-1-F Drawn Brass Weatherproof Sill Moulding



S-2-V
Cross Section
Actual Size



S-2-V Drawn Brass Weatherproof Sill Moulding



Showing method of
installing our Drawn
Brass Sill Moulding
(Not drawn to scale)



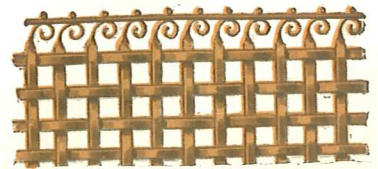
$\frac{3}{8}'' \times \frac{13}{16}''$
18 B. & S. Ga.



Brass Angle for use with Brass Sill Moulding



No. 567 Copper Screen Door Grille
Twisted Pattern



No. 565 Copper Screen Door Grille
Flat Pattern

*Furnished with or without scroll at top in full standard lengths only,
10 ft. long by 30 in. wide*

U. T. HUNGERFORD BRASS & COPPER Co.

STAR ★ BRAND

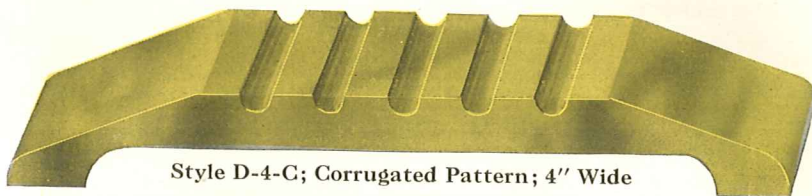
DRAWN BRASS DOOR SADDLES

The Following Sizes Are Carried In Our Warehouse Stock Ready For Immediate Shipment

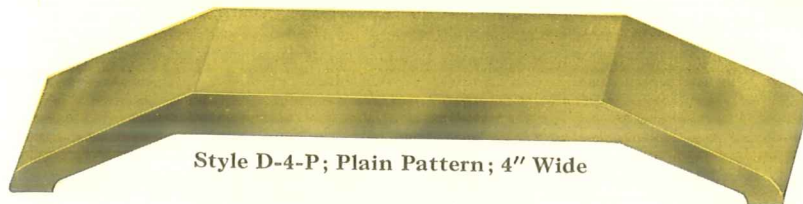
Furnished in any exact length up to 12 Ft.

Odd widths up to 6" supplied promptly from mill.

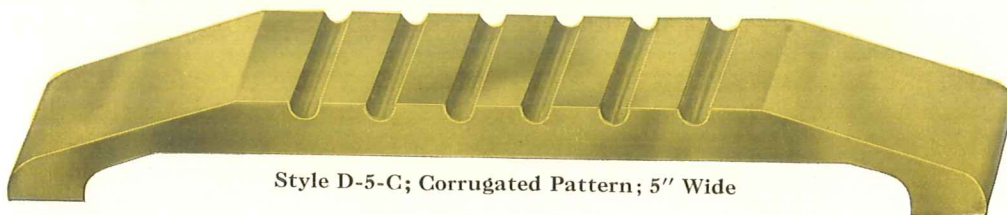
Notched end cuts furnished without extra charge provided they can be made on a circular bench saw.



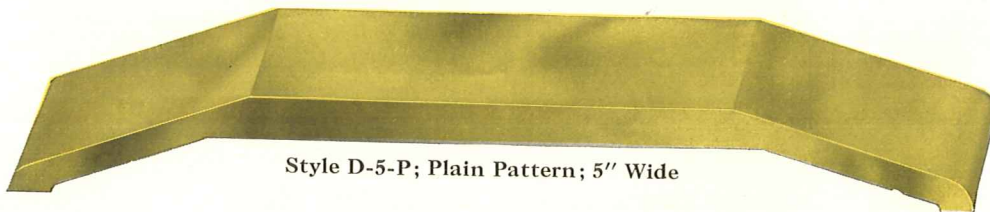
Style D-4-C; Corrugated Pattern; 4" Wide



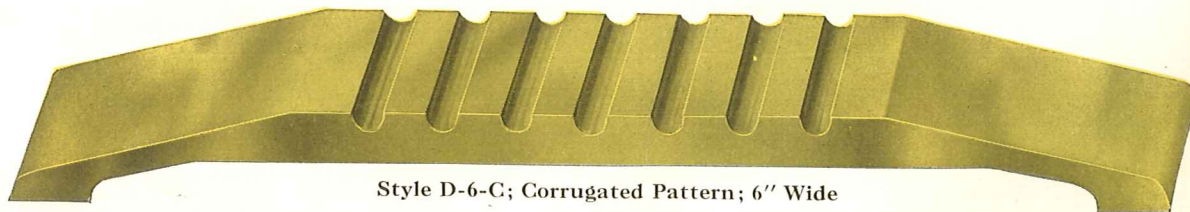
Style D-4-P; Plain Pattern; 4" Wide



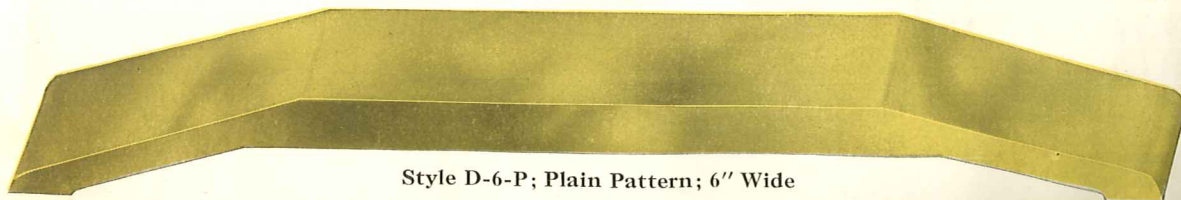
Style D-5-C; Corrugated Pattern; 5" Wide



Style D-5-P; Plain Pattern; 5" Wide



Style D-6-C; Corrugated Pattern; 6" Wide



Style D-6-P; Plain Pattern; 6" Wide

Cross sections illustrated are actual size.

On interior doorways, *plain* types of our *Drawn* Brass Saddles are generally used. The heavier *corrugated* patterns are best suited to exterior entrances as well as interiors where traffic is heavy.

U.T. HUNGERFORD



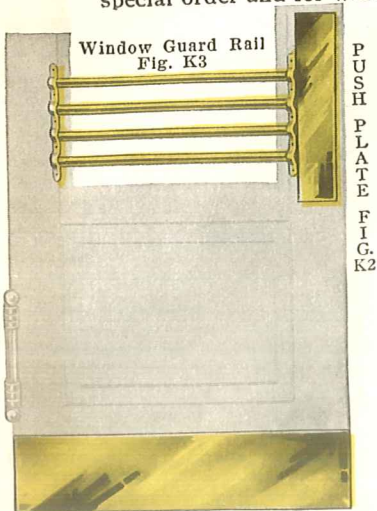
BRASS & COPPER CO.

BRASS AND BRONZE

RAILINGS, GRILLES, FITTINGS AND ACCESSORIES

FOR OFFICES, CHURCHES, THEATERS AND OTHER PUBLIC BUILDINGS

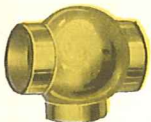
Illustrations represent a few of the many styles and types of equipment that we carry in stock or have made to special order and for which we have the necessary patterns and tools to duplicate upon short notice



Kick Plate, Fig. K1



Rope End Fitting,
Fig. R4



Engine Rail
Tee Fitting



Engine Rail
Elbow Fitting



Ball Pattern
End Fitting



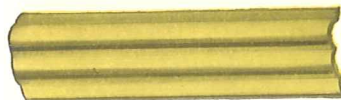
Cast
Rail Standard
No. 131



Tubular
Rail
Standard
No. 101



Diamond Pattern Stair Nosing,
Fig. N1



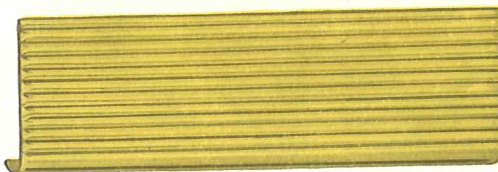
Fluted Pattern Stair Nosing,
Fig. N2



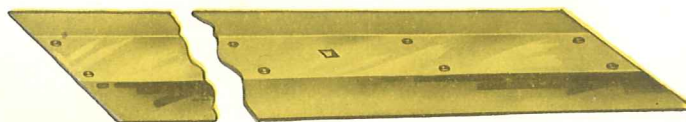
Plain Stair Nosing,
Fig. N3



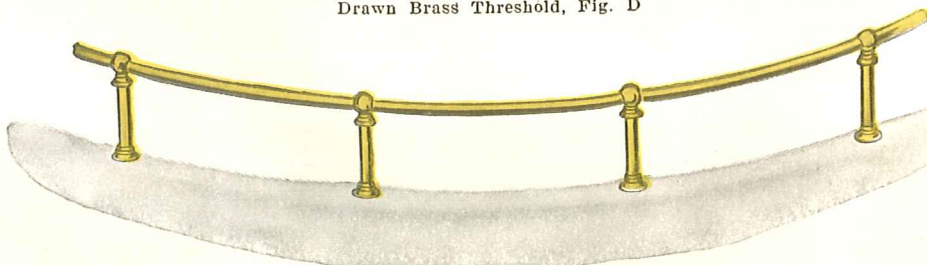
Diamond Pattern Stair Plate, Fig. S4



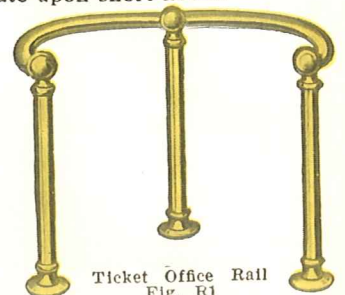
Corrugated Pattern Stair Plate, Fig. S5



Drawn Brass Threshold, Fig. D



Box or Balcony Rail, Fig. R5



Ticket Office Rail
Fig. R1



Tubular
Rail
Standard
No. 100



Office
Gate
No. 122



Hand Rail
End
No. 128



Hand Rail
Bracket
No. 116



Hand Rail
End
No. 117



Hand Rail
Bracket
No. 112



Cast
Rail Standard
No. 134

U.T. HUNGERFORD



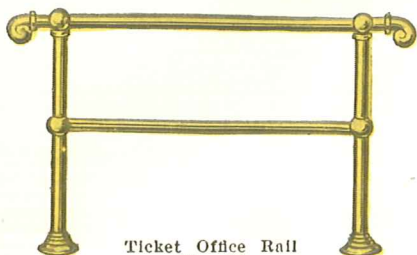
BRASS & COPPER CO.

BRASS AND BRONZE

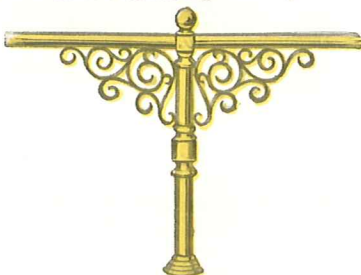
RAILINGS, GRILLES, FITTINGS AND ACCESSORIES

FOR OFFICES, CHURCHES, THEATERS AND OTHER PUBLIC BUILDINGS

In addition to the styles and types of equipment shown here we have facilities for furnishing promptly from our stock or to special order, practically anything in this line, made according to our own, customer's or Architect's drawings and specifications



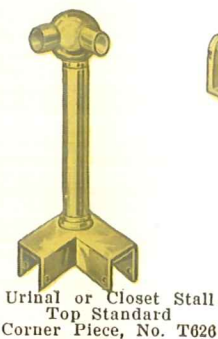
Ticket Office Rail
Fig. R2



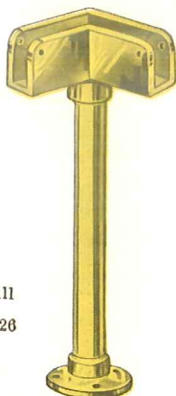
Chancel Rail, Fig. R3



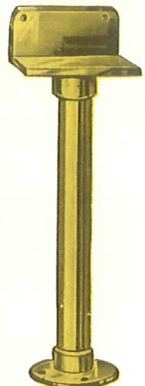
Bronze Memorial Tablet,
Fig. H1



Urinal or Closet Stall
Top Standard
Corner Piece, No. T628



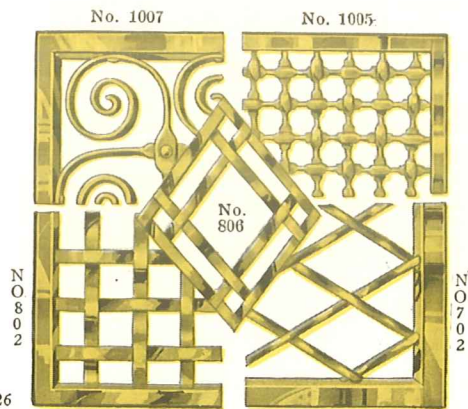
Urinal or Closet Stall
Corner Piece, Leg, No. F626



Urinal
or Closet Stall
Center Piece
Leg, No. F620



Urinal
or Closet Stall
Top Standard
Center Piece
No. T624



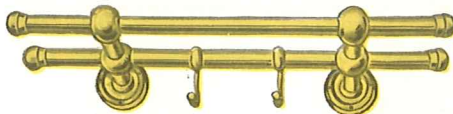
Brass Wire Work



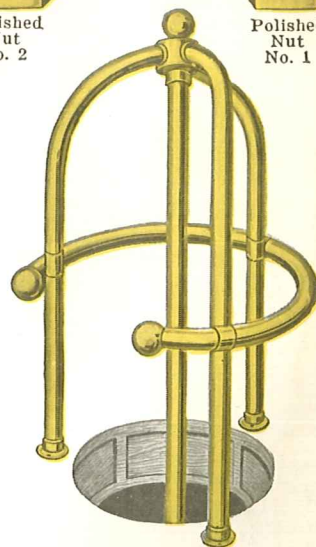
Polished
Nut
No. 2



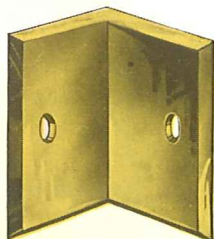
Polished
Nut
No. 1



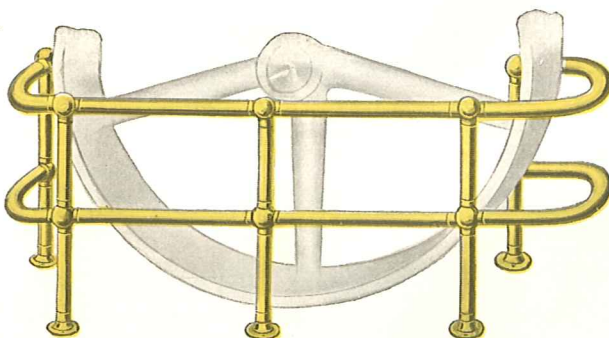
Hat and Coat Rack, No. 152



Canopy Type Sliding Pole
Fig. R6



Urinal or Closet Stall
Cast Brass Angle, No. F664



Engine Guard Rail, Fig. R7



Urinal
or Closet Stall
Cast Brass
Angle
No. F661

U.T.HUNGERFORD



BRASS & COPPER CO.

STAR ★ BRAND

PERFORATED SHEET BRASS AND COPPER

We have tools for the patterns listed below (which includes those illustrated on opposite page) or can furnish any stock size of our "Star Brand" Brass, Copper, Nickel Silver or Bronze, perforated in practically any pattern or design. It is not practicable, however, to perforate holes of smaller diameter than the thickness of the metal.

In ordering, exact dimension of sheet required should be specified, kind of metal and thickness in B. & S. or Stubs Ga. (be sure to state which). If blank or selvage edge is required, specify width and on which sides; specify also size and location of bolt holes in margin; submit sketch if possible.

Specify whether perforations are to be round, square, oval or oblong; give approximate distance from centers; state whether perforations are to be staggered or in line both ways; if diagonal slot, specify direction in which perforations are to run. State purpose or kind of service for which plate is to be used.

ROUND HOLE PERFORATIONS

No.	00; .020"	Holes, 625 to	Sq. In.	Staggered.
"	0; .023"	576	"	"
"	0A; .023"	400	"	"
"	1; .027"	400	"	"
"	1A; .027"	257	"	"
"	2; .033"	324	"	"
"	2A; .033"	225	"	"
"	3; .039"	225	"	"
"	3A; .039"	169	"	"
"	4; .045"	225	"	"
"	5; .045"	169	"	"
"	6; .050"	144	"	"
"	6A; .050"	100	"	"
"	7; .057"	144	"	"
"	7A; .057"	100	"	"
"	8A; $\frac{1}{16}$ "	100	"	"
"	8B; $\frac{1}{16}$ "	$\frac{1}{8}$ in. C. to C.,		Staggered.
"	.065"	$\frac{7}{64}$	"	"
"	9; .068"	81 to Sq. In.		Straight.
"	9A; .068"	50	"	"
"	10B; .072"	50	"	"
"	.075"	$\frac{1}{8}$ in. C. to C.,		Staggered.
"	.077"	Hatters' Cone Perforation.		
"	.085"	$\frac{1}{8}$ in. C. to C.,		Staggered.
"	10A; .085"	64 to Sq. In.		Straight.
"	10D; .085"	49	"	"
"	$\frac{3}{32}$ "	$\frac{5}{32}$ in. C. to C.,		"
"	$\frac{3}{32}$ "	$\frac{3}{16}$	"	"
"	11; .100"	49 to Sq. In.		Straight.
"	12; .100"	36	"	"
"	14A; $\frac{1}{8}$ "	25	"	"
"	14B; $\frac{1}{8}$ "	25	"	Staggered.
"	15; .150"	25	"	"
"	$\frac{5}{32}$ "	$\frac{1}{4}$ in. C. to C.,		"
"	16; $\frac{3}{16}$ "	16 to Sq. In.		"
"	$\frac{3}{16}$ "	$\frac{5}{16}$ in. C. to C.		"
"	$\frac{1}{4}$ "	$\frac{3}{8}$	"	"
"	$\frac{5}{16}$ "	$\frac{7}{16}$	"	"
"	$\frac{3}{8}$ "	$\frac{1}{2}$	"	"
"	$\frac{1}{2}$ "	$\frac{11}{16}$	"	"
"	$\frac{5}{8}$ "	$\frac{7}{8}$	"	"
"	$\frac{3}{4}$ "	$1\frac{1}{8}$	"	"

STRAIGHT SLOT HOLE PERFORATIONS

$\frac{3}{64}$ " x $\frac{1}{2}$ "	Holes,	$\frac{3}{16}$ " C. to C.,	Staggered	Sidewise.
$\frac{3}{64}$ " x $\frac{1}{2}$ "	"	$\frac{3}{16}$ "	"	"
$\frac{1}{16}$ " x $\frac{3}{4}$ "	"	$\frac{3}{16}$ "	"	"
$\frac{1}{16}$ " x 1"	"	$\frac{3}{16}$ "	"	"
$\frac{3}{32}$ " x $\frac{3}{4}$ "	"	$\frac{3}{16}$ "	"	Endwise.
$\frac{1}{8}$ " x $\frac{1}{2}$ "	"	$\frac{1}{4}$ "	"	"
$\frac{1}{8}$ " x $\frac{1}{2}$ "	"	$\frac{1}{4}$ "	"	Sidewise.
$\frac{1}{8}$ " x $\frac{3}{4}$ "	"	$\frac{1}{4}$ "	"	Endwise.
$\frac{1}{8}$ " x $1\frac{1}{2}$ "	"	$\frac{1}{4}$ "	"	Sidewise.
$\frac{5}{32}$ " x $\frac{3}{4}$ "	"	$\frac{5}{16}$ "	"	Endwise.
$\frac{3}{16}$ " x $\frac{3}{8}$ "	"	$\frac{3}{8}$ "	"	"
$\frac{3}{16}$ " x $\frac{3}{4}$ "	"	$\frac{3}{8}$ "	"	"
$\frac{3}{16}$ " x $\frac{3}{4}$ "	"	$\frac{3}{8}$ "	"	Sidewise.
$\frac{3}{16}$ " x 1"	"	$\frac{3}{8}$ "	"	"
$\frac{3}{16}$ " x $1\frac{1}{16}$ "	"	$1\frac{1}{32}$ "	"	"
$\frac{3}{16}$ " x 2"	"	$\frac{3}{8}$ "	"	"
$\frac{1}{4}$ " x $\frac{1}{2}$ "	"	$\frac{1}{6}$ "	"	Endwise.
$\frac{1}{4}$ " x $\frac{3}{8}$ "	"	$\frac{1}{6}$ "	"	"
$\frac{1}{4}$ " x $\frac{3}{4}$ "	"	$\frac{1}{6}$ "	"	"
$\frac{1}{4}$ " x $1\frac{1}{4}$ "	"	$\frac{1}{2}$ "	"	Sidewise.
$\frac{1}{4}$ " x $1\frac{1}{2}$ "	"	$\frac{1}{2}$ "	"	"
$\frac{1}{4}$ " x 2"	"	$\frac{1}{2}$ "	"	"
$\frac{5}{16}$ " x 1"	"	$\frac{5}{8}$ "	"	"
$\frac{3}{8}$ " x $\frac{3}{4}$ "	"	$\frac{5}{8}$ "	"	Endwise.
$\frac{5}{8}$ " x $1\frac{1}{4}$ "	"	$\frac{3}{4}$ "	"	Sidewise.
$\frac{1}{2}$ " x 1"	"	$1\frac{3}{16}$ "	"	Endwise.

No. 22; Standard Perforations Staggered Sidewise for Well Points.

DIAGONAL SLOT HOLE PERFORATIONS

$\frac{1}{32}$ " x $\frac{1}{2}$ "	Holes,	$\frac{1}{8}$ " C. to C.
$\frac{1}{16}$ " x $\frac{1}{2}$ "	"	$\frac{3}{16}$ "
$\frac{3}{32}$ " x $\frac{1}{2}$ "	"	$\frac{5}{16}$ "
$\frac{1}{8}$ " x $\frac{1}{2}$ "	"	$\frac{7}{16}$ "
$\frac{5}{32}$ " x $\frac{1}{2}$ "	"	$\frac{1}{2}$ "
$\frac{3}{32}$ " x $\frac{1}{2}$ "	"	$\frac{9}{32}$ " (Herringbone).

SQUARE HOLE PERFORATIONS

$\frac{3}{32}$ "	Holes,	$\frac{3}{16}$ " C. to C.,	Straight.
$\frac{3}{32}$ "	"	$\frac{3}{16}$ "	Staggered.
$\frac{1}{8}$ "	"	$\frac{1}{4}$ "	"
$\frac{5}{16}$ "	"	$\frac{5}{16}$ "	"
$\frac{1}{4}$ "	"	$\frac{7}{16}$ "	Straight.
$\frac{3}{8}$ "	"	$\frac{9}{16}$ "	Staggered.
$\frac{1}{2}$ "	"	$\frac{3}{4}$ "	Straight.
$\frac{3}{4}$ "	"	1	"
$\frac{3}{4}$ "	"	1	Staggered.

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BRASS & COPPER CO.

STAR ★ BRAND

PERFORATED SHEET BRASS AND COPPER

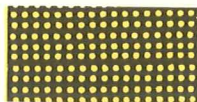
Not carried in stock, but can be furnished promptly to special order. Illustrations below cover only a few of the many patterns for which we have tools and can furnish promptly. See opposite page for details.



No. 00 Staggered



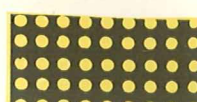
No. 0A Staggered



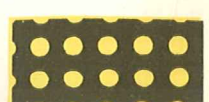
No. 2 Straight



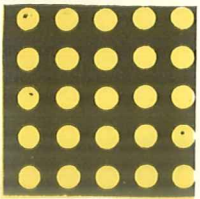
No. 5 Staggered



No. 9 Straight



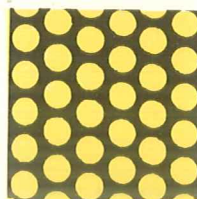
No. 12 Straight



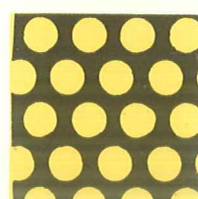
No. 14A Straight



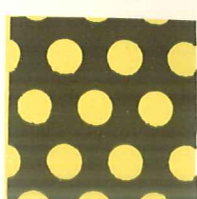
No. 14B Staggered



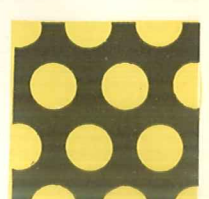
No. 15 Staggered



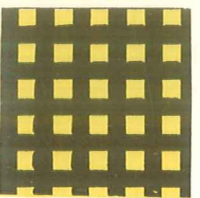
No. 16 Staggered



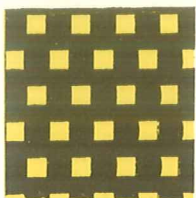
$\frac{3}{16}$ In. Staggered



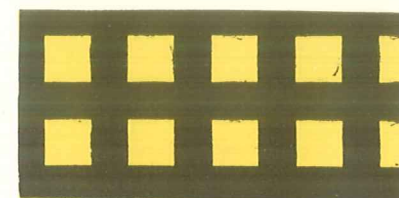
$\frac{1}{4}$ In. Staggered



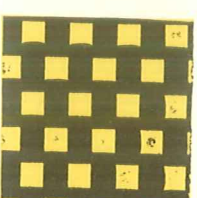
$\frac{3}{32}$ In. Straight



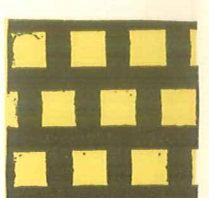
$\frac{3}{32}$ In. Staggered



$\frac{1}{4}$ In. Straight



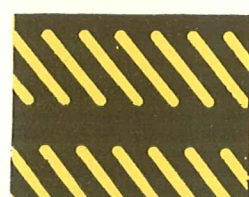
$\frac{1}{8}$ In. Staggered



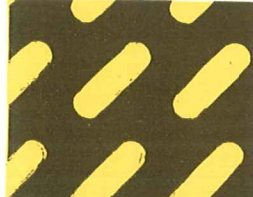
$\frac{3}{16}$ In. Staggered



No. 22 Staggered Sidewise



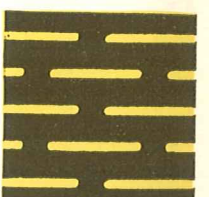
$\frac{1}{16} \times \frac{1}{2}$ In. Diagonal



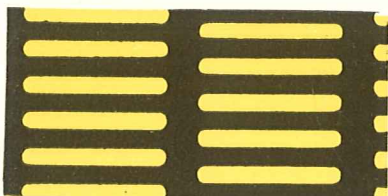
$\frac{5}{32} \times \frac{1}{2}$ In. Diagonal



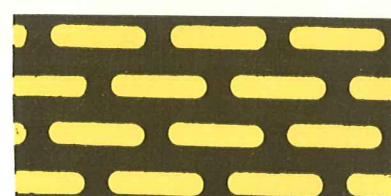
$\frac{3}{32} \times \frac{1}{2}$ In. Herringbone



$\frac{3}{64} \times \frac{1}{2}$ In. Staggered Sidewise



$\frac{3}{32} \times \frac{3}{4}$ In. Staggered Endwise



$\frac{1}{8} \times \frac{1}{2}$ In. Staggered Endwise



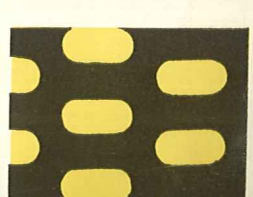
$\frac{1}{8} \times \frac{1}{2}$ In. Staggered Sidewise



$\frac{1}{4} \times \frac{1}{2}$ In. Staggered Endwise



$\frac{3}{16} \times 2$ In. Staggered Sidewise



$\frac{3}{16} \times \frac{3}{8}$ In. Staggered Endwise

U.T. HUNGERFORD



BRASS & COPPER CO.

MONEL METAL

Monel is not a *manufactured* or *synthetic* metal. It is a *natural* alloy of Nickel and Copper, smelted and refined just as it comes from the mine without in any way altering the *natural* proportions and combination of these two non-rusting basic elements. Monel Metal contains approximately 67% Nickel and 28% Copper; the remaining 5% being made up of other elements.

In color, Monel Metal can hardly be distinguished from pure Nickel. It is a ductile, tough, white metal through and through, and can be machined, forged, soldered, brazed and welded.

While Monel is sometimes referred to as a "non-corrosive" metal, that is somewhat of a misnomer. Monel Metal will not "rust" in the sense that iron and steel corrode, but neither is it impervious to all metal-eating agents. Chemical and metallurgical science have yet to discover a metal that cannot be attacked by some acid or corrosive agent.

In most instances, however, where non-ferrous metals are quickly attacked, the action of the same destructive agents on Monel Metal is negligible; oftentimes, in fact, have no effect upon it whatsoever.

HOT ROLLED RODS

Diameters In Inches	Weight of Standard Stock Sizes In Pounds Per Lineal Foot		
	Round	Square	Hexagon
1/8"	.048		
3/16"	.108		
1/4"	.190		
5/16"	.297		
3/8"	.428	.545	
7/16"	.583		
1/2"	.761	.969	.839
9/16"	.963		
5/8"	1.189	1.514	1.311
11/16"	1.439		
3/4"	1.712	2.180	1.887
13/16"	2.010		
7/8"	2.331	2.968	2.570
15/16"	2.766		
1"	3.044	3.876	3.356
1 1/16"	3.436		
1 1/8"	3.853	4.906	4.248
1 1/16"	4.293		
1 1/4"	4.756	6.056	5.243
1 5/16"	5.244		
1 3/8"	5.756	7.328	6.346
1 7/16"	6.291		
1 1/2"	6.849	8.721	7.551
1 9/16"	7.432		
1 5/8"	8.039	10.235	8.863
1 11/16"	8.669		
1 3/4"	9.321	11.870	10.276
1 13/16"	10.001		
1 7/8"	10.702	13.627	11.799
1 15/16"	11.428		
2"	12.178	15.504	13.426
2 1/8"	13.747		
2 1/4"	15.411		
2 3/8"	17.171		
2 1/2"	19.027		
2 5/8"	20.977		
2 3/4"	23.022		
2 7/8"	25.162		
3"	27.399		
3 1/4"	32.155		
3 1/2"	37.291		
3 3/4"	42.810		
4"	48.706		
4 1/4"	54.985		
4 1/2"	61.644		
4 3/4"	68.714		
5"	76.105		

COLD DRAWN RODS

Diameter in Inches	Weight in Pounds Per Lin. Ft.	
	Round	
3/32"	.026	
1/8"	.048	
5/32"	.070	
3/16"	.108	
7/32"	.149	
1/4"	.190	
9/32"	.243	
5/16"	.297	
11/32"	.362	
3/8"	.428	
13/32"	.505	
7/16"	.583	
15/32"	.672	
1/2"	.761	
17/32"	.852	
9/16"	.963	
5/8"	1.189	
3/4"	1.712	
7/8"	2.331	
1"	3.044	
1 1/8"	3.853	
1 1/4"	4.756	
1 3/8"	5.756	
1 1/2"	6.849	
1 5/8"	8.039	
1 3/4"	9.321	
1 7/8"	10.702	
2"	12.178	

HOT ROLLED SHEETS

Hot Rolled			
Thickness In U.S.S. Gauge	Weight In Lbs. Per Sq. Foot	Standard Stock Sizes* In Inches	
No. 3	11.493		36"x72"
5	10.056	36"x84"	44"x84"
7	8.619	36"x84"	44"x84"
8	7.901	36"x96"	48"x96"
9	7.183	36"x96"	48"x108"
10	6.465	36"x96"	48"x120"
11	5.746	36"x96"	48"x120"
12	5.028	36"x96"	48"x120"
13	4.310	36"x96"	48"x120"
14	3.591	36"x96"	48"x120"
15	3.232	36"x96"	48"x120"
16	2.873	36"x96"	48"x120"
17	2.586	36"x96"	44"x120"
18	2.300	36"x96"	44"x120"
19	2.011	36"x96"	44"x120"
20	1.724	36"x96"	44"x120"
21	1.580	36"x96"	
22	1.437	36"x96"	
23	1.293	36"x96"	
24	1.149	36"x96"	
25	1.005	36"x96"	
26	.862	36"x96"	

* Any of the above standard stock sizes of Hot Rolled Monel Metal Sheet can be furnished cut to special dimensions.

U.T. HUNGERFORD BRASS & COPPER CO.

MONEL METAL

NAILS, TACKS, RIVETS, WASHERS, SCREWS, ETC.

The Following Sizes are carried In Our Warehouse Stock Ready For Immediate Shipment

Standard Wire Nails

Packed in 5 lb. Boxes

Lengths..... 2"
Stubs Gauge..... 12

Regular Cut Nails

Packed in 5 lb. Boxes

3/4", 7/8", 1", 1 1/8", 3 1/2"

Clout Nails

Packed in 5 lb. Boxes

3/4", 7/8"

Sheathing Nails

Packed in 5 lb. Boxes

1", 1 1/2"

Wire Roofing Nails

Packed in 5 lb. Boxes

1 1/4" Long, No. 11 Stubs Ga.

Cut Finishing Nails

Packed in 5 lb. Boxes

1" and 1 1/4" Long

Flat Head Tacks

Packed in 1 lb. Boxes and in Bulk

1/2", 5/8", 3/4"

Oval Head Tacks

Packed in 1 lb. Boxes

5/8", 3/4", 7/8", 1"

Round Head Rivets

1/4" Long	1/8",	Dia.
3/8" "	1/4",	"
1/2" "	3/16", 1/4", 5/16", 3/8"	"
5/8" "	1/8", 3/16", 1/4", 5/16", 3/8"	"
3/4" "	1/8", 3/16", 1/4", 5/16", 3/8"	"
7/8" "	1/8", 3/16", 1/4", 5/16", 3/8"	"
1" "	1/8",	"
1 1/8" "	1/4",	"
1 1/4" "	3/16", 1/4", 5/16", 3/8"	"
1 1/2" "	3/16", 1/4", 5/16", 3/8"	"
1 3/4" "	1/4", 5/16", 3/8"	"
2" "	5/16", 3/8"	"
2 1/4" "	5/16", 3/8"	"
2 3/4" "	1/4",	"
2 7/8" "	5/16",	"

Flat Head Rivets

3/8" Long,	1/8",	3/16",	Dia.
1/2" "	1/8", 5/32", 1/4", 5/16"	1/4", 5/16"	"
5/8" "	1/8", 3/16", 1/4", 5/16"	5/16"	"
3/4" "	1/8", 3/16",	3/8", 5/16"	"
7/8" "	1/8", 3/16",	3/8"	"
1" "	1/8", 3/16", 1/4", 5/16"	5/16"	"
1 1/4" "	3/16", 1/4", 5/16"	5/16"	"
1 1/2" "	3/16", 1/4", 5/16"	5/16"	"

Countersunk Head Rivets

1/2" Long,	1/8",	1/4", 5/16",	Dia.
5/8" "	1/8",	1/4", 5/16"	"
3/4" "	1/8", 3/16", 1/4", 5/16"	5/16"	"
1" "	1/8", 3/16", 1/4", 5/16"	5/16"	"
1 1/4" "	3/16", 1/4", 5/16"	5/16"	"
1 1/2" "	3/16", 1/4", 5/16"	5/16"	"

Tinners Rivets

1/2, 3/4, 2, 2 1/2, 3, 4, 5, 6, 7, 8, 10 and 12
Lbs. to the Thousand

Escutcheon Pins

1/2" Long (Under Head), 15, 16 Stubs, Ga.
5/8" " " 14, 15,
3/4" " " 13,

Washers

Standard Sizes for 3/16", 1/4", 5/16", 3/8", 1/2",
5/8", 3/4", 7/8", 1" and 1 1/4" Bolts

Cold Pressed Machine Screw Nuts

Packed in Boxes of 1 Gross

Hexagon..... 10/24 and 14/20 Thread

Hexagon Head Cap Screws

1/2" Long,	1/4", 3/8", 1/2"	Long
3/4" "	1/4", 3/8", 1/2"	"
1" "	1/4", 3/8", 1/2"	"
1 1/4" "	1/4", 3/8", 1/2"	"
1 1/2" "	3/8", 1/2"	"
2" "	3/8", 1/2", 5/8", 3/4"	"
2 1/2" "	3/8", 1/2"	"
3" "	3/8", 1/2"	"

Round and Flat Head Machine Screws

8/32;	3/8", 1/2", 5/8", 3/4",
10/24;	3/8", 1/2", 5/8", 3/4", 1", 1 1/4",
14/24;	3/8", 1/2", 5/8", 3/4", 1", 1 1/4", 1 1/2", 2"

Monel Metal Hex. Turned Nuts

U. S. S. TAPPED

Packed in Bulk

1/4", 5/16", 3/8", 7/16", 1/2", 5/8", 3/4", 7/8", 1",
1 1/8", 1 1/4"

Square Head, Gimlet Point Lag Screws

Packed in Bulk

1/4" Dia.,	1 1/2", 2", 3", 4"	Long
3/8" "	2", 3", 4"	"
1/2" "	3", 4"	"
5/8" "	3", 4", 6"	"

Monel Metal Wood Screws

Packed in Boxes of 1 Gross

Oval Head.....	1/2" long, No.	4, 6
" "	5/8" "	2, 7
" "	1 1/4" "	6, 7
Round ".....	1 1/2" "	10, 12
" "	3" "	18
Flat ".....	3/8" "	3
" "	1/2" "	10
" "	3/4" "	3, 5
" "	1 1/4" "	16
" "	1 1/2" "	12, 18
" "	1 3/4" "	18, 20
" "	2" "	14
" "	2 1/2" "	14
" "	3" "	16
" "	3 1/2" "	18

Tiller Rope

In Coils of 500 Feet

3/16", 1/4", 5/16", 3/8", 7/16", 1/2", 9/16", 5/8", 3/4"

Ball Bearings

1/8", 5/32", 3/16", 7/32", 1/4", 5/16", 3/8", 7/16", 1/2",
5/8", 3/4", 7/8", 1" Dia.

U.T. HUNGERFORD



BRASS & COPPER CO.

METAL SPECIALTIES

SCREW MACHINE WORK

Comprises an unlimited range of sizes and styles of small parts and special articles, in fact practically anything that can be turned from straight rod stock.

On quantity work very material economies are often-times possible of attainment by employing modern Automatic Screw Machine equipment.

This class of work is a specialty with us and we can furnish Automatic Screw Machine products of all descriptions ranging in size anywhere from 1-64" to 3½" in diameter, in Brass, Bronze, Copper, Nickel Silver, Monel Metal, Aluminum and Special Alloys.

Where quantities required are too small to warrant "setting up" Automatics, we are equally well prepared to produce work by means of hand screw machines and lathes.

Parts can be supplied in any standard or special finish.

CASTINGS—ROUGH OR MACHINED

Furnished in Brass, Bronze, Nickel Silver, Monel and special metals in any size, shape and quantity.

Nothing short of the most skillful workmanship resulting from long Foundry experience and the expert supervision that is employed in the production of our castings can secure results that will pass the rigid requirements of our inspectors.

Our castings are close grained, free from flaws and sand holes and composition is uniform as only new metals are used. Extensive moulding machine equipment enables us to turn out quantity jobs very economically.

SPRINGS AND FORMED WIRE PARTS

We offer you the benefit of every modern facility in the production of this class of work. Economy and efficiency in manufacturing processes as well as accuracy and highest quality of product are the outstanding features of our bid for your business in this line.

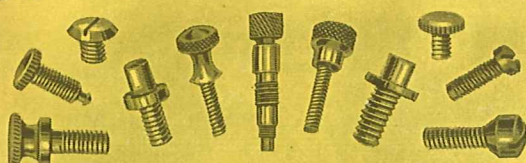
Limited space available here does not permit illustration of all varieties of springs but whatever your requirements may be we are confident of our ability to fill them satisfactorily in every respect.

Skillful Handling—

of machinery and materials by our trained factory operatives enables us to guarantee that the quality of our products will meet your specifications and requirements in every respect.

Frequent Inspections—

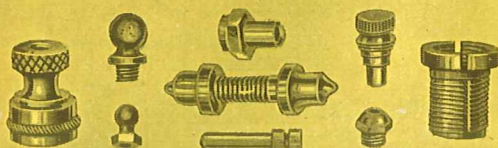
during the various processes of manufacture insure against defects, inaccuracies and sub-standard results of any character.



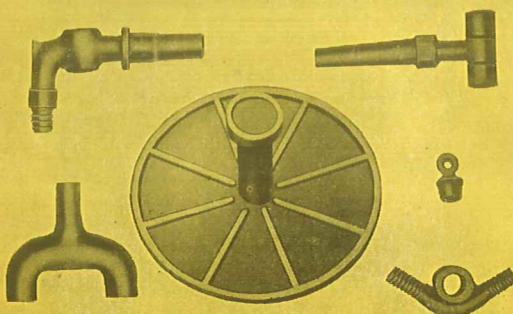
Special Screws



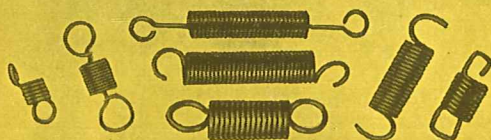
Special Nuts



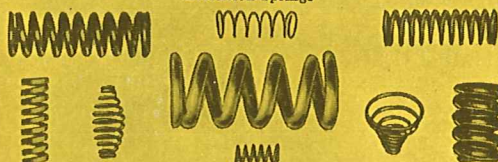
Miscellaneous Parts



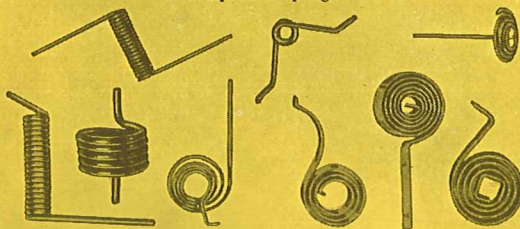
Special Castings



Extension Springs



Compression Springs



Torsion Springs

Special Wire Springs

U.T. HUNGERFORD



BRASS & COPPER CO.

METAL SPECIALTIES

SHEET METAL PARTS

Cut, Drawn, Stamped, Spun and Formed articles of any style, shape or size can be furnished promptly and in many instances at costs that are surprisingly low.

Articles of this nature can be supplied completely assembled or in any intermediate stage of manufacture, such as, for example, articles and parts illustrated on this page.

To manufacturers who desire to do their own assembling and finishing, extreme care in handling work strictly according to specifications is of vital importance. This we endeavor at all times to do; a series of rigid inspections to which we subject all of our work insures complete satisfaction on this score.

A description of subsequent operations indicating how such articles are to be finished and handled in the final assembling operations oftentimes helps materially to secure satisfactory results.

METAL NOVELTIES—

MECHANICAL DEVICES

In addition to our ability to supply the various classes of parts briefly outlined above we are prepared to furnish special novelties and mechanical devices completely assembled for those who do not have the proper equipment and manufacturing facilities for doing this class of work themselves.

In addition to complete specifications and blue prints, full information as to essential operations and ultimate use of the article should accompany all inquiries and orders.

COPPERSMITH PRODUCTS—PIPE COILS

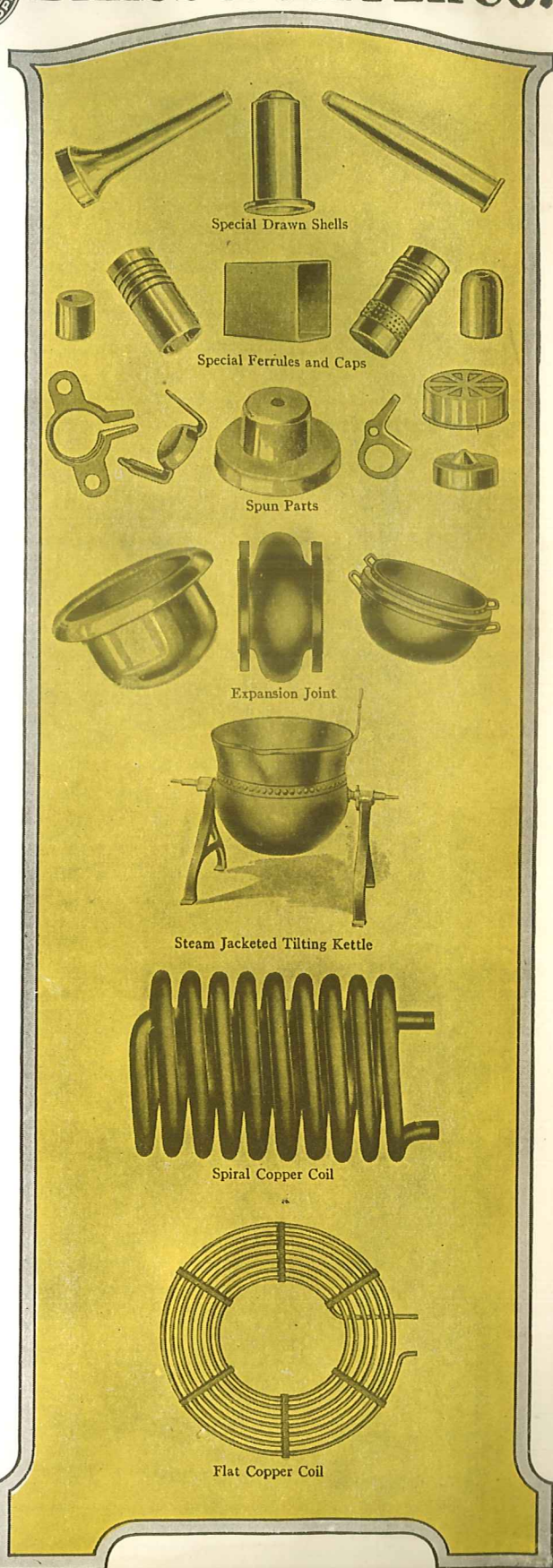
Orders and inquiries are solicited for anything in this line from the simplest type of Brass or Copper Coil, Bend, Pan or Kettle to the most intricate and extensive rectifying and evaporating apparatus or other highly specialized equipment.

Consultation—

with our corps of trained specialists is invited. They will be pleased to offer suggestions as to the adaptability of various automatic machine operations which might prove advantageous in connection with products you are now making or with work which you may have in contemplation for future production.

Samples, Blue Prints or Detailed Sketch—

with full specifications of your exact requirements should accompany all orders and inquiries in order that there may be no misunderstanding as to exactly what is wanted.



U.T.HUNGERFORD



BRASS & COPPER CO.

STAR ★ BRAND

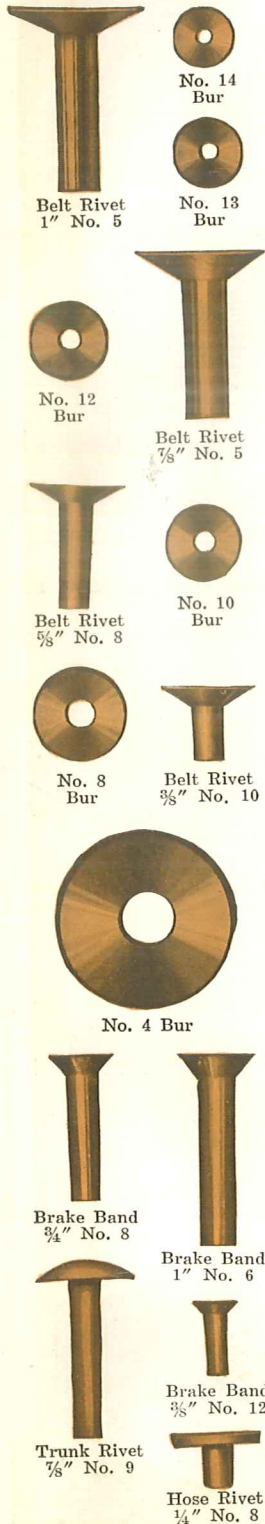
COPPER RIVETS AND BURS

Ready For Immediate Shipment From Our Warehouse Stock

COPPER BELT RIVETS AND BURS

UNIFORM LENGTHS OF A SIZE PACKED IN 1-POUND BOXES

All Sizes Not Otherwise Specified (See Footnotes Below) Are Carried in Stock
Packed Both With and Without Burs



Rivet Gauge	Lengths Carried in Stock															
No. 5	1/2"	...	5/8"	3/4"	7/8"	1"	...	1 1/4"	1 1/2"	1 3/4"	2"	...
" 6	1/2"	...	5/8"	3/4"	7/8"	1"	...	1 1/4"	1 1/2"	1 3/4"	2"	...
" 7	1/2"	...	5/8"	3/4"	7/8"	1"	...	1 1/4"	1 1/2"	1 3/4"	2"	...
" 8	1/2"	...	5/8"	3/4"	7/8"	1"	...	1 1/4"	1 1/2"	1 3/4"	2"	...
" 9	1/2"	...	5/8"	3/4"	7/8"	1"	...	1 1/4"	1 1/2"	1 3/4"	2"	...
" 10	1/2"	...	5/8"	3/4"	7/8"	1"	...	1 1/4"	1 1/2"	1 3/4"	2"	...
" 11	1/2"	...	5/8"	3/4"	7/8"	1"	...	1 1/4"	1 1/2"	1 3/4"	2"	...
" 12	1/2"	...	5/8"	3/4"	7/8"	1"	...	1 1/4"	1 1/2"	1 3/4"	2"	...
" 13	1/2"	...	5/8"	3/4"	7/8"	1"	...	1 1/4"	1 1/2"	1 3/4"	2"	...
" 14	1/2"	...	5/8"	3/4"	7/8"	1"	...	1 1/4"	1 1/2"	1 3/4"	2"	...
" 15	1/2"	...	5/8"	3/4"	7/8"	1"	...	1 1/4"	1 1/2"	1 3/4"	2"	...

"*" Asterisk denotes that Rivets only (without Burs) are carried in stock in standard 1-pound boxes. These sizes are not regularly carried in stock packed with Burs.
"†" Dagger denotes that Rivets with necessary Burs only are carried in stock in standard 1-pound boxes. These sizes are not regularly carried in stock packed without Burs.

COPPER BELT RIVETS AND BURS

ASSORTED LENGTHS 3/8" TO 3/4"

Nos. 7, 8, 9 and 10; packed in 1-pound boxes.

Nos. 7, 8, 9, 10 and 12; packed in 1/2-pound boxes; 10 boxes (5 pounds) to a carton.

Nos. 7, 8, 9 and 10; packed in 1/4-pound boxes; 12 boxes (3 pounds) to a carton.

COPPER BURS ONLY

PACKED IN 1-POUND BOXES

Nos. 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15 and 16.

COPPER BRAKE BAND RIVETS

PACKED IN 1-POUND BOXES

Rivet Gauge	Lengths Carried in Stock															
No. 6	1/2"	...	5/8"	3/4"	7/8"	1"	...	1 1/4"	1 1/2"	1 3/4"	2"	...
" 7	1/2"	...	5/8"	3/4"	7/8"	1"	...	1 1/4"	1 1/2"	1 3/4"	2"	...
" 8	1/2"	...	5/8"	3/4"	7/8"	1"	...	1 1/4"	1 1/2"	1 3/4"	2"	...
" 9	1/2"	...	5/8"	3/4"	7/8"	1"	...	1 1/4"	1 1/2"	1 3/4"	2"	...
" 10	1/2"	...	5/8"	3/4"	7/8"	1"	...	1 1/4"	1 1/2"	1 3/4"	2"	...
" 12	1/2"	...	5/8"	3/4"	7/8"	1"	...	1 1/4"	1 1/2"	1 3/4"	2"	...

OVAL HEAD COPPER TRUNK RIVETS

PACKED IN 1-POUND BOXES

Packed Without Burs Except Sizes Noted With Asterisk "*" Which Are Packed Both With and Without Necessary Burs.

Rivet Gauge	Lengths Carried in Stock															
No. 9	...	1/4"	5/16"	*3/8"	*7/16"	*1/2"	...	*5/8"	*3/4"	*7/8"	*1"	1 1/8"	1 1/4"	1 1/2"	1 3/4"	...
" 12	...	1/4"	5/16"	3/8"	7/16"	1/2"	...	5/8"	3/4"	7/8"	1"	1 1/8"	1 1/4"	1 1/2"	1 3/4"	...

FLAT HEAD COPPER HOSE RIVETS

PACKED WITHOUT BURS IN 1-POUND BOXES

Rivet Gauge	Lengths Carried in Stock															
No. 7	...	1/4"	...	3/8"	7/16"	1/2"	...	5/8"	3/4"	7/8"	1"	...	1 1/8"	1 1/4"	1 1/2"	1 3/4"
" 8	5/16"	3/8"	7/16"	1/2"	...	5/8"	3/4"	7/8"	1"	...	1 1/8"	1 1/4"	1 1/2"	1 3/4"

U.T.HUNGERFORD



BRASS & COPPER CO.

STAR ★ BRAND

COPPER RIVETS AND BURS

Ready For Immediate Shipment From Our Warehouse Stock

ROUND HEAD COPPER RIVETS PACKED WITHOUT BURS

Diameter of Shank	Lengths Carried in Stock, Packed in 1-Pound Boxes									
1/16"	1/8"	3/16"	1/4"	5/16"	3/8"	1/2"	5/8"	3/4"	7/8"	1"
1/8"	1/8"	3/16"	1/4"	5/16"	3/8"	1/2"	5/8"	3/4"	7/8"	1"
3/16"	1/8"	3/16"	1/4"	5/16"	3/8"	1/2"	5/8"	3/4"	7/8"	1"
1/4"	1/8"	3/16"	1/4"	5/16"	3/8"	1/2"	5/8"	3/4"	7/8"	1"
5/16"	1/8"	3/16"	1/4"	5/16"	3/8"	1/2"	5/8"	3/4"	7/8"	1"
3/8"	1/8"	3/16"	1/4"	5/16"	3/8"	1/2"	5/8"	3/4"	7/8"	1"
1/2"	1/8"	3/16"	1/4"	5/16"	3/8"	1/2"	5/8"	3/4"	7/8"	1"
5/8"	1/8"	3/16"	1/4"	5/16"	3/8"	1/2"	5/8"	3/4"	7/8"	1"
3/4"	1/8"	3/16"	1/4"	5/16"	3/8"	1/2"	5/8"	3/4"	7/8"	1"
7/8"	1/8"	3/16"	1/4"	5/16"	3/8"	1/2"	5/8"	3/4"	7/8"	1"
1"	1/8"	3/16"	1/4"	5/16"	3/8"	1/2"	5/8"	3/4"	7/8"	1"

Diameter of Shank	Lengths Carried in Stock, Packed in 5-Pound Boxes									
3/16"	1/4"	1 1/4"	1 1/2"	1 3/4"	2"	2 1/4"	2 3/4"	3"	3 1/4"	3 1/2"
1/4"	1/4"	1 1/4"	1 1/2"	1 3/4"	2"	2 1/4"	2 3/4"	3"	3 1/4"	3 1/2"
5/16"	1/4"	1 1/4"	1 1/2"	1 3/4"	2"	2 1/4"	2 3/4"	3"	3 1/4"	3 1/2"
3/8"	1/4"	1 1/4"	1 1/2"	1 3/4"	2"	2 1/4"	2 3/4"	3"	3 1/4"	3 1/2"
1/2"	1/4"	1 1/4"	1 1/2"	1 3/4"	2"	2 1/4"	2 3/4"	3"	3 1/4"	3 1/2"
5/8"	1/4"	1 1/4"	1 1/2"	1 3/4"	2"	2 1/4"	2 3/4"	3"	3 1/4"	3 1/2"
3/4"	1/4"	1 1/4"	1 1/2"	1 3/4"	2"	2 1/4"	2 3/4"	3"	3 1/4"	3 1/2"
7/8"	1/4"	1 1/4"	1 1/2"	1 3/4"	2"	2 1/4"	2 3/4"	3"	3 1/4"	3 1/2"
1"	1/4"	1 1/4"	1 1/2"	1 3/4"	2"	2 1/4"	2 3/4"	3"	3 1/4"	3 1/2"

COUNTERSUNK HEAD COPPER RIVETS

PACKED WITHOUT BURS IN 1-POUND BOXES

Except sizes noted with asterisk "*" which are packed in 5-Pound Boxes.

Diameter of Shank	Lengths Carried in Stock									
1/8"	3/16"	1/4"	3/8"	1/2"	5/8"	3/4"	7/8"	1"	1 1/4"	1 1/2"
3/16"	3/16"	1/4"	3/8"	1/2"	5/8"	3/4"	7/8"	1"	1 1/4"	1 1/2"
1/4"	3/16"	1/4"	3/8"	1/2"	5/8"	3/4"	7/8"	1"	1 1/4"	1 1/2"
5/16"	3/16"	1/4"	3/8"	1/2"	5/8"	3/4"	7/8"	1"	1 1/4"	1 1/2"
3/8"	3/16"	1/4"	3/8"	1/2"	5/8"	3/4"	7/8"	1"	1 1/4"	1 1/2"
1/2"	3/16"	1/4"	3/8"	1/2"	5/8"	3/4"	7/8"	1"	1 1/4"	1 1/2"
5/8"	3/16"	1/4"	3/8"	1/2"	5/8"	3/4"	7/8"	1"	1 1/4"	1 1/2"
3/4"	3/16"	1/4"	3/8"	1/2"	5/8"	3/4"	7/8"	1"	1 1/4"	1 1/2"
7/8"	3/16"	1/4"	3/8"	1/2"	5/8"	3/4"	7/8"	1"	1 1/4"	1 1/2"
1"	3/16"	1/4"	3/8"	1/2"	5/8"	3/4"	7/8"	1"	1 1/4"	1 1/2"

OVAL HEAD COPPER BRAZIERS' RIVETS

PACKED WITHOUT BURS IN 5-POUND BOXES

* Except 1 1/8" No. 7, which is packed only in 25-Pound bulk cases.

Numbers Carried in Stock	00	0	1	2	3	4	5	6	7	*7	8	9	10
Diameter of Shank	5/16"	3/8"	1/2"	5/8"	3/4"	7/8"	1"	1 1/8"	1 1/4"	1 1/2"	1 3/4"	2"	2 1/4"
Lengths Under Head	5/16"	3/8"	1/2"	5/8"	3/4"	7/8"	1"	1 1/8"	1 1/4"	1 1/2"	1 3/4"	2"	2 1/4"

FLAT HEAD COPPER BRAZIERS' RIVETS

PACKED WITHOUT BURS IN 5-POUND BOXES

Diameter of Shank	Lengths Carried in Stock									
1/4"	1/2"	5/8"	3/4"	1"	1 1/4"	1 1/2"	1 3/4"	2"	2 1/4"	2 1/2"
5/16"	1/2"	5/8"	3/4"	1"	1 1/4"	1 1/2"	1 3/4"	2"	2 1/4"	2 1/2"
3/8"	1/2"	5/8"	3/4"	1"	1 1/4"	1 1/2"	1 3/4"	2"	2 1/4"	2 1/2"
1/2"	1/2"	5/8"	3/4"	1"	1 1/4"	1 1/2"	1 3/4"	2"	2 1/4"	2 1/2"

FLAT HEAD COPPER TINNERS' RIVETS

PACKED WITHOUT BURS IN BOXES OF 1,000

Sizes Carried in Stock										
1/2 lb.	3/4 lb.	1 lb.	1 1/4 lb.	1 1/2 lb.	1 3/4 lb.	2 lb.	2 1/2 lb.	3 lb.	4 lb.	5 lb.
6 lb.										

FLAT HEAD BRASS TINNERS' RIVETS

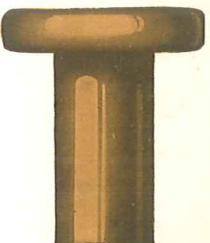
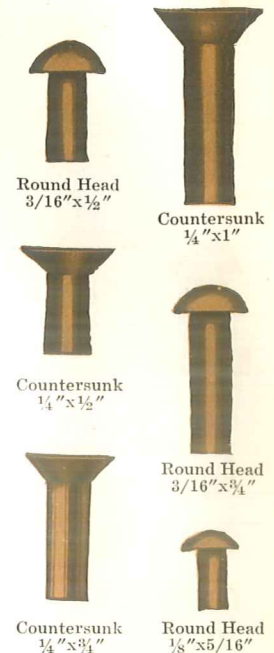
PACKED WITHOUT BURS IN BOXES OF 1,000

Sizes Carried in Stock						
1/2 lb.	3/4 lb.	1 lb.	1 1/4 lb.	1 1/2 lb.	2 lb.	2 1/2 lb.
3 lb.						

FLAT HEAD METALLIC TINNED IRON TINNERS' RIVETS

PACKED WITHOUT BURS IN BOXES OF 1,000

Sizes Carried in Stock												
8 oz.	10 oz.	12 oz.	1 lb.	1 1/4 lb.	1 1/2 lb.	1 3/4 lb.	2 lb.	2 1/2 lb.	3 lb.	3 1/2 lb.	4 lb.	5 lb.
6 lb.	7 lb.											



Flat Head Brazier
1/2"x1"



Oval Head Brazier
No. 2, 17/64"x1 1/2"



Tinner's
1 lb. to M.



Tinner's
1 1/2 lbs. to M.



Tinner's
4 lbs. to M.



Tinner's
6 lbs. to M.

U.T.HUNGERFORD



BRASS & COPPER Co.

STAR ★ BRAND

BRASS RIVETS AND WASHERS

Ready For Immediate Shipment From Our Warehouse Stock

ROUND HEAD BRASS RIVETS

PACKED WITHOUT BURS IN 1-POUND BOXES

Except sizes noted with asterisk "*", which are also packed in 5-pound boxes.

Diameter of Shank	Lengths Carried in Stock													
1/8"	1/8"	3/16"	1/4"	5/16"	3/8"	1/2"	5/8"	3/4"	1"	1 1/8"	1 1/4"	1 1/2"	1 3/4"	2"
3/16"	3/8"	1/2"	5/8"	3/4"	1"	1 1/8"	1 1/4"	1 1/2"	1 3/4"	2"	2 1/4"	2 1/2"	2 3/4"	3"
1/4"	1/2"	3/4"	1"	1 1/8"	1 1/4"	1 1/2"	1 3/4"	2"	2 1/4"	2 1/2"	2 3/4"	3"	3 1/4"	3 1/2"



Round Head
3/16"x5/8"

Round Head
1/4"x1"



Jacket
3/16" No. 8



Countersunk
3/16"x5/8"

COUNTERSUNK HEAD BRASS RIVETS

PACKED WITHOUT BURS IN 1-POUND BOXES

Diameter of Shank	Lengths Carried in Stock													
1/8"	1/8"	3/16"	1/4"	5/16"	3/8"	1/2"	5/8"	3/4"	1"	1 1/8"	1 1/4"	1 1/2"	1 3/4"	2"
3/16"	3/8"	1/2"	5/8"	3/4"	1"	1 1/8"	1 1/4"	1 1/2"	1 3/4"	2"	2 1/4"	2 1/2"	2 3/4"	3"

OVAL HEAD BRASS JACKET RIVETS

PACKED WITHOUT BURS IN 1-POUND BOXES

Rivet Gauge	No. 7	No. 8	No. 9	No. 12	No. 13
Lengths Carried in Stock	1/4"	1/4"	1/4"	1/4"	5/16" 1/4"



Washer
or Bur



No. 12
Washer



Washer
or Bur



No. 8
Washer



No. 10
Washer

BRASS WASHERS

Sizes Carried in Stock Packed in 1-Pound Boxes													
No.	12	10	9	8	7	6	5	4	3	2	1	1/2	1/4
For Bolt	1/2"	3/8"	1/4"	3/16"	1/8"	3/16"	1/8"	1/16"	1/32"	1/64"	1/128"	1/256"	1/512"
Inside Dia.	.124"	.138"	.152"	.166"	.180"	.194"	.208"	.222"	.236"	.250"	.264"	.278"	.292"
Outside Dia.	.236"	.250"	.264"	.278"	.292"	.306"	.320"	.334"	.348"	.362"	.376"	.390"	.404"
Thickness	.028"	.036"	.044"	.052"	.060"	.068"	.076"	.084"	.092"	.100"	.108"	.116"	.124"

Sizes Carried in Stock Packed in 5-Pound Boxes													
For Bolt	1/2"	3/8"	1/4"	3/16"	1/8"	3/16"	1/8"	1/16"	1/32"	1/64"	1/128"	1/256"	1/512"
Inside Dia.	.124"	.138"	.152"	.166"	.180"	.194"	.208"	.222"	.236"	.250"	.264"	.278"	.292"
Outside Dia.	.236"	.250"	.264"	.278"	.292"	.306"	.320"	.334"	.348"	.362"	.376"	.390"	.404"
Thickness	.028"	.036"	.044"	.052"	.060"	.068"	.076"	.084"	.092"	.100"	.108"	.116"	.124"

COPPER WASHERS

Sizes Carried in Stock Packed in 1-Pound Boxes													
For Bolt	1/2"	3/8"	1/4"	3/16"	1/8"	3/16"	1/8"	1/16"	1/32"	1/64"	1/128"	1/256"	1/512"
Inside Dia.	.124"	.138"	.152"	.166"	.180"	.194"	.208"	.222"	.236"	.250"	.264"	.278"	.292"
Outside Dia.	.236"	.250"	.264"	.278"	.292"	.306"	.320"	.334"	.348"	.362"	.376"	.390"	.404"
Thickness	.025"	.045"	.050"	.053"	.068"	.065"	.065"	.065"	.065"	.065"	.065"	.065"	.065"

Sizes Carried in Stock Packed in 5-Pound Boxes													
For Bolt	1/2"	3/8"	1/4"	3/16"	1/8"	3/16"	1/8"	1/16"	1/32"	1/64"	1/128"	1/256"	1/512"
Inside Dia.	.124"	.138"	.152"	.166"	.180"	.194"	.208"	.222"	.236"	.250"	.264"	.278"	.292"
Outside Dia.	.236"	.250"	.264"	.278"	.292"	.306"	.320"	.334"	.348"	.362"	.376"	.390"	.404"
Thickness	.025"	.045"	.050"	.053"	.068"	.065"	.065"	.065"	.065"	.065"	.065"	.065"	.065"

ROUND HEAD ALUMINUM RIVETS

PACKED IN 1-POUND BOXES

1/8" Dia., 3/8" and 1/2" Long..... 3/16" Dia., 1/2" and 5/8" Long

SPECIAL RIVETS

In all shapes and sizes furnished promptly to special order.

No. 6 Washer



Washer or Bur



Special Rivets



Special Rivets



U.T.HUNGERFORD



BRASS & COPPER CO.

TUBULAR AND SPLIT RIVETS

OUTSIDE PRONG RIVETS, PUSH RIVETS AND CAPS

Ready For Immediate Shipment From Our Warehouse Stock

TUBULAR RIVETS

Style Number	Finish	Standard Packing	Lengths Carried in Stock					
632 or No. 1	Coppered	Cartons 12- 50s	Assorted lengths.....					
632 " 1	Japanned	" 12- 50s	" " " " " " " "	3/16"	to 5/16"	...	...	...
632 " 1	"	" 12-100s	" " " " " " " "	3/16"	" 5/16"	...	...	...
632 " 1	Coppered	Boxes of 1,000	3/16" 3/16" 5/16" 5/16" 7/16" 7/16" 9/16" 9/16" 1 1/16" 1 1/16"	5/16"	5/16"	...	19 1/16"	12 1/16"
632 " 1	Japanned	Cartons 12- 50s	3/16" 3/16" 5/16" 5/16" 7/16" 7/16" 9/16" 9/16" 1 1/16" 1 1/16"	5/16"	5/16"	...	19 1/16"	12 1/16"
738 " " " "	"	Boxes of 1,000	3/16" 3/16" 5/16" 5/16" 7/16" 7/16" 9/16" 9/16" 1 1/16" 1 1/16"	5/16"	5/16"	...	19 1/16"	12 1/16"
738 " " " "	Solid Brass	" 1,000	3/16" 3/16" 5/16" 5/16" 7/16" 7/16" 9/16" 9/16" 1 1/16" 1 1/16"	5/16"	5/16"	...	19 1/16"	12 1/16"
1657 " " " "	"	Cartons 12-100s	3/16" 3/16" 5/16" 5/16" 7/16" 7/16" 9/16" 9/16" 1 1/16" 1 1/16"	5/16"	5/16"	...	19 1/16"	12 1/16"
	"	Boxes of 1000	3/16" 3/16" 5/16" 5/16" 7/16" 7/16" 9/16" 9/16" 1 1/16" 1 1/16"	5/16"	5/16"	...	19 1/16"	12 1/16"

SPLIT RIVETS

Style Number	Finish	Standard Packing	Lengths Carried in Stock					
325 or No. 3	Coppered	Cartons 12- 50s	Assorted lengths.....					
264 " " " "	"	" 12- 50s	" " " " " " " "	3/16"	to 1 1/16"	...	...	...
264 " " " "	"	" 12-100s	" " " " " " " "	3/16"	" 5/16"	...	...	...
264 " " " "	Japanned	" 12- 50s	" " " " " " " "	3/16"	" 5/16"	...	...	...
203 " " " "	Solid Brass	Boxes of 1,000	3/16" 3/16" 5/16" 5/16" 7/16" 7/16" 9/16" 9/16" 1 1/16" 1 1/16"	5/16"	5/16"	...	19 1/16"	12 1/16"
272 " " " "	"	" 1,000	3/16" 3/16" 5/16" 5/16" 7/16" 7/16" 9/16" 9/16" 1 1/16" 1 1/16"	5/16"	5/16"	...	19 1/16"	12 1/16"
264 " " " "	Coppered	Cartons 12-50s	3/16" 3/16" 5/16" 5/16" 7/16" 7/16" 9/16" 9/16" 1 1/16" 1 1/16"	5/16"	5/16"	...	19 1/16"	12 1/16"
264 " " " "	"	Boxes of 1,000	3/16" 3/16" 5/16" 5/16" 7/16" 7/16" 9/16" 9/16" 1 1/16" 1 1/16"	5/16"	5/16"	...	19 1/16"	12 1/16"
264 " " " "	Brassed	" 5,000	3/16" 3/16" 5/16" 5/16" 7/16" 7/16" 9/16" 9/16" 1 1/16" 1 1/16"	5/16"	5/16"	...	19 1/16"	12 1/16"
264 " " " "	Japanned	" 1,000	3/16" 3/16" 5/16" 5/16" 7/16" 7/16" 9/16" 9/16" 1 1/16" 1 1/16"	5/16"	5/16"	...	19 1/16"	12 1/16"
291 " " " "	Coppered	" 1,000	3/16" 3/16" 5/16" 5/16" 7/16" 7/16" 9/16" 9/16" 1 1/16" 1 1/16"	5/16"	5/16"	...	19 1/16"	12 1/16"
291 " " " "	Japanned	" 1,000	3/16" 3/16" 5/16" 5/16" 7/16" 7/16" 9/16" 9/16" 1 1/16" 1 1/16"	5/16"	5/16"	...	19 1/16"	12 1/16"
1717 " " " "	Solid Brass	" 1,000	3/16" 3/16" 5/16" 5/16" 7/16" 7/16" 9/16" 9/16" 1 1/16" 1 1/16"	5/16"	5/16"	...	19 1/16"	12 1/16"
1717 " " " "	"	Cartons 12-100s	3/16" 3/16" 5/16" 5/16" 7/16" 7/16" 9/16" 9/16" 1 1/16" 1 1/16"	5/16"	5/16"	...	19 1/16"	12 1/16"
1879 " " " "	"	Boxes of 1,000	3/16" 3/16" 5/16" 5/16" 7/16" 7/16" 9/16" 9/16" 1 1/16" 1 1/16"	5/16"	5/16"	...	19 1/16"	12 1/16"
1879 " " " "	"	Cartons 12-100s	3/16" 3/16" 5/16" 5/16" 7/16" 7/16" 9/16" 9/16" 1 1/16" 1 1/16"	5/16"	5/16"	...	19 1/16"	12 1/16"
2970 " " " "	"	Boxes of 1,000	3/16" 3/16" 5/16" 5/16" 7/16" 7/16" 9/16" 9/16" 1 1/16" 1 1/16"	5/16"	5/16"	...	19 1/16"	12 1/16"
2970 " " " "	"	Cartons 12-100s	3/16" 3/16" 5/16" 5/16" 7/16" 7/16" 9/16" 9/16" 1 1/16" 1 1/16"	5/16"	5/16"	...	19 1/16"	12 1/16"
2970 " " " "	"	Boxes of 25,000	3/16" 3/16" 5/16" 5/16" 7/16" 7/16" 9/16" 9/16" 1 1/16" 1 1/16"	5/16"	5/16"	...	19 1/16"	12 1/16"
308 " " " "	Coppered	" 25,000	3/16" 3/16" 5/16" 5/16" 7/16" 7/16" 9/16" 9/16" 1 1/16" 1 1/16"	5/16"	5/16"	...	19 1/16"	12 1/16"
1815 " " " "	"	" 1,000	3/16" 3/16" 5/16" 5/16" 7/16" 7/16" 9/16" 9/16" 1 1/16" 1 1/16"	5/16"	5/16"	...	19 1/16"	12 1/16"

OUTSIDE PRONG RIVETS

No. 496, Japanned, in Boxes of 5,000, 3/16" long.
No. 496, Japanned, in Boxes of 25M, 3/16" long.

PUSH RIVETS

Nos. 156 and 787, Brass, in Boxes of 1,000, 10/16" long.
Nos. 780 and 781, Brass, in Boxes of 1,000, 7/16", 8/16", 9/16" long.

CAPS

No. 530, Coppered, in Boxes of 1,000.
No. 530, Japanned, in Boxes of 1,000.

SPOTS

Nickeled Nos. 200-201-202
Brassed Nos. 625-1100-1101

HAND RIVET SETS

No. 632, for Tubular Rivets.
No. 264, for Split Rivets.

AUTOMATIC RIVETING MACHINES

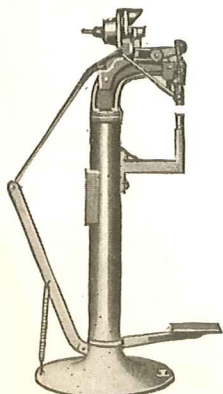
Short Post and Short Arm
(as illustrated).

BRASS EYELETS

Nos. 179, A-435, A-1217, A-1218.



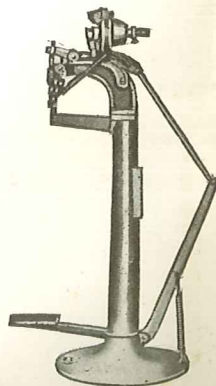
No. 496
O. P. Rivet
(Twice
actual size)



Short Post
Setting Machine



Hand Set No. 264 for Split Rivets



Short Arm
Setting Machine

U.T.HUNGERFORD



BRASS & COPPER CO.

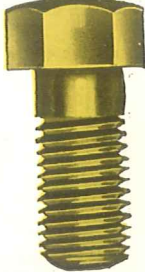
STAR ★ BRAND

BRASS BOLTS AND NUTS

The Following Sizes Are Carried In Our Warehouse Stock Ready For Immediate Shipment



Hex. Head Machine Bolt



Hex. Head Machine Bolt



Round Head Machine Screw



Square Head Bolt Blank

Flat Head Wood Screw



Hex. Head Bolt Blank



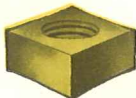
Round Head Wood Screw



Flat Head Machine Screw



Sq. Head Set Screw



Sq. Nut



Hex. Nut



Cast Nut



Cast Nut

HEXAGON HEAD MACHINE BOLTS BRASS, MUNTZE METAL AND BRONZE

MASTER CAR BUILDERS STANDARD SIZE AND THREAD

1/4" Diam.	1 1/4"	1 1/2"	2"	2 1/2"	3"	3 1/2"	4"	5"	6"	Long
3/16"	1 1/4"	1 1/2"	2"	2 1/2"	3"	3 1/2"	4"	5"	6"	"
1/2"	1 1/4"	1 1/2"	2"	2 1/2"	3"	3 1/2"	4"	5"	6"	"
3/4"	1 1/4"	1 1/2"	2"	2 1/2"	3"	3 1/2"	4"	5"	6"	"
1"	1 1/4"	1 1/2"	2"	2 1/2"	3"	3 1/2"	4"	5"	6"	"
1 1/4"	1 1/4"	1 1/2"	2"	2 1/2"	3"	3 1/2"	4"	5"	6"	"
1 1/2"	1 1/4"	1 1/2"	2"	2 1/2"	3"	3 1/2"	4"	5"	6"	"
2"	1 1/4"	1 1/2"	2"	2 1/2"	3"	3 1/2"	4"	5"	6"	"
2 1/2"	1 1/4"	1 1/2"	2"	2 1/2"	3"	3 1/2"	4"	5"	6"	"
3"	1 1/4"	1 1/2"	2"	2 1/2"	3"	3 1/2"	4"	5"	6"	"
3 1/2"	1 1/4"	1 1/2"	2"	2 1/2"	3"	3 1/2"	4"	5"	6"	"
4"	1 1/4"	1 1/2"	2"	2 1/2"	3"	3 1/2"	4"	5"	6"	"
5"	1 1/4"	1 1/2"	2"	2 1/2"	3"	3 1/2"	4"	5"	6"	"
6"	1 1/4"	1 1/2"	2"	2 1/2"	3"	3 1/2"	4"	5"	6"	"

‡ Carried only in our Philadelphia Stock.

HEXAGON CAST BRASS NUTS

U. S. S. SIZE AND TAP, PACKED IN BULK

3/8"/16,	*7/16"/14,	1/2"/13,	5/8"/11,	3/4"/10,
7/8"/9,	1"/8,	*1 1/8"/7,	1 1/4"/7,	1 3/8"/6,
				1 1/2"/5

* Carried only in our Boston Stock.

‡ Carried only in our Philadelphia Stock.

ROUND AND FLAT HEAD BRASS MACHINE SCREWS OR CORNICE BOLTS

IN PACKAGES OF ONE GROSS

Round Head	10/24	Thread	1/2"	5/8"	3/4"	1"	1 1/4"	Long
"	1/4"/20	"	1/2"	5/8"	3/4"	1"	1 1/4"	"
Flat Head	10/24	"	1/2"	5/8"	3/4"	1"	1 1/4"	"
"	1/4"/20	"	1/2"	5/8"	3/4"	1"	1 1/4"	"

COLD PRESSED MACHINE SCREW NUTS

IN PACKAGES OF ONE GROSS

Brass, Square	10/24	and	1/4"/No. 20
" Hexagon	10/24	"	1/4"/No. 20
Iron, Square	10/24	"	1/4"/No. 20

HEXAGON TURNED BRASS NUTS

U. S. S. SIZE AND TAP, PACKED IN BULK

1/4"/20,	5/16"/18,	3/8"/16,	1/2"/13,	5/8"/11,	*1 3/4"/10,	*1 7/8"/9,	1 1/8"/8,	1 1/8"/7,	1 1/4"/7
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* Carried only in our Boston Stock.

‡ Carried only in our Philadelphia Stock.

SQUARE CAST BRASS NUTS

U. S. S. TAPPED, PACKED IN BULK

1/4"	5/16"	3/8"	1/2"
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HEXAGON HEAD BRASS TAP BOLTS

1/2" Dia.,	1 3/4" Long	5/8" Dia.,	1 3/4" and	2 1/4" Long
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‡ Carried only in our Philadelphia Stock

U.T.HUNGERFORD



BRASS & COPPER CO.

STAR ★ BRAND

BRASS BOLTS AND NUTS

The Following Sizes Are Carried in Our Warehouse Stock Ready for Immediate Shipment

BRASS LAG SCREWS

SQUARE HEAD, GIMLET POINT
PACKED IN BULK

		Sizes Carried in Stock							
Diameter		*1 1/2"	*2"	*2 1/2"	*3"	*3 1/2"	..	..	Long
1/4"	"	1 1/2"							"
5/16"	"	..	2"	2 1/2"	3"	3 1/2"	4"	5"	"
3/8"	"	..	2"	2 1/2"	3"	3 1/2"	4"	5"	"
1/2"	"	..	2"	2 1/2"	3"	3 1/2"	4"	5"	"
5/8"	"	..	2"	2 1/2"	3"	3 1/2"	4"	5"	"
3/4"	"	..	2"	2 1/2"	..	..	4"	5"	"

* Carried only in our Boston Warehouse Stock.

BRASS CARRIAGE BOLTS

ROUND HEAD, SQUARE NECK
U. S. S. THREAD PACKED IN BULK

Diameter		2"	2 1/2"	3"	3 1/2"	4"	..	5"	Long
1/4"	"	2"	2 1/2"	3"	3 1/2"	4"	..	5"	"
5/16"	"	2"	2 1/2"	3"	3 1/2"	4"	..	5"	"
3/8"	"	2"	2 1/2"	3"	3 1/2"	4"	4 1/2"	5"	"
1/2"	"	2"	2 1/2"	3"	3 1/2"	4"	*4 1/2"	5"	"

Carried only in our Boston Stock.

BRASS LAUNDRY EQUIPMENT BOLTS

OVERSIZE, LARGE DIAMETER ROUND HEADS

SHARP CORNERED SQUARE NECKS, U. S. S. THREAD

3/8" Dia., 1 1/2" and 1 3/4" Long., 1/2" Dia., 1 3/8" Long., 5/8" Dia., 1 1/2" Long.

‡ Carried only in our Philadelphia Stock.

HEXAGON HEAD BRASS CAP SCREWS

U. S. S. THREAD, PACKED IN BULK

Diameter		3/4"	1"	1 1/4"	1 1/2"	2"	2 1/2"	Long
1/4"	"	3/4"	1"	1 1/4"	1 1/2"	2"	2 1/2"	"
5/16"	"	3/4"	1"	1 1/4"	1 1/2"	2"	2 1/2"	"
3/8"	"	3/4"	1"	1 1/4"	1 1/2"	2"	2 1/2"	"
1/2"	"	3/4"	1"	1 1/4"	1 1/2"	2"	2 1/2"	"

HEX., NICKEL PLATED, BRASS, ACORN CAP NUTS

No. 2, Closed Head

THREADED BRASS ROD

1/4" Dia., No. 20 Thread, 24" Long

BRASS SPRING COTTER PINS

PACKED IN BOXES OF 100

Diameter		1/2"	3/4"	1"	..	..	..	Long
1/16"	"	..	3/4"	1"	1 1/4"	1 1/2"	..	"
3/32"	"	..	3/4"	1"	1 1/4"	1 1/2"	2"	"
1/8"	"	..	3/4"	1"	1 1/4"	1 1/2"	2"	"
3/16"	"	1 1/4"	1 1/2"	2"	"
1/4"	"	1 1/2"	2"	"

In addition to sizes and styles of Bolts and Nuts carried in our stock, we are fully equipped to manufacture promptly and economically, special sizes and kinds of Bolts, Nuts, Screws and Turned parts of any description, in Brass, Bronze, and other Non-ferrous alloys.



Square Head Gimlet Point Lag Screw



Hex. Head Cap Screw



Round Head Square Shank Carriage Bolt



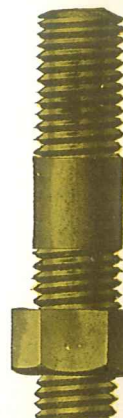
Special Sq. Head Cap Screw



Special Set Screw



Special Fil. Head Cap Screw



Special Round Stud Bolt, Hex. Nut



Special Studding or Stay Bolt



Special Thumb Screw



Special Knurled Nut



Spring Brass Cotters

U.T.HUNGERFORD



BRASS & COPPER CO.

STAR ★ BRAND

WROUGHT BRASS BUTTS

BRASS CHECKS, RED METAL SASH CHAIN
AND COPPER HAMMERS

The Following Sizes Are Carried In Our Ware-
house Stock Ready For Immediate Shipment

WROUGHT BRASS BUTTS (HINGES)

Packed in Cartons of 24 Doz. Pairs
(1 Doz. to a Box, 24 Boxes to a Carton)

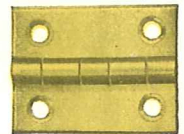
"NARROW" $\frac{1}{2}$ " "MIDDLE" $\frac{1}{2}$ "

Packed in Cartons of 6 Doz. Pairs
(1 Doz. to a Box, 6 Boxes to a Carton)

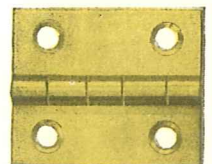
"NARROW" $\frac{3}{4}$ ", $\frac{7}{8}$ ", 1", $1\frac{1}{4}$ ", $1\frac{1}{2}$ ", $1\frac{3}{4}$ ", 2"
"MIDDLE" $\frac{3}{4}$ ", 1", $1\frac{1}{4}$ ", $1\frac{1}{2}$ ", $1\frac{3}{4}$ ", 2"
"BROAD" $\frac{3}{4}$ ", 1", $1\frac{1}{4}$ ", $1\frac{1}{2}$ ", $1\frac{3}{4}$ ", 2"
"DESK" $\frac{3}{4}$ ", $\frac{7}{8}$ ", 1", $1\frac{1}{8}$ ", $1\frac{1}{4}$ ", $1\frac{1}{2}$ "

Packed in Cartons of 3 Doz. Pairs
(1 Doz. to a Box, 3 Boxes to a Carton)

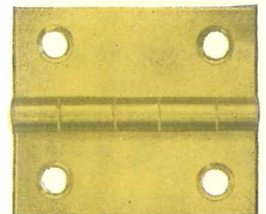
"NARROW" $2\frac{1}{4}$ ", $2\frac{1}{2}$ ", 3"
"MIDDLE" $2\frac{1}{4}$ ", $2\frac{1}{2}$ ", $2\frac{3}{4}$ ", 3"
"BROAD" $2\frac{1}{4}$ ", $2\frac{1}{2}$ ", 3"
"DESK" 2"



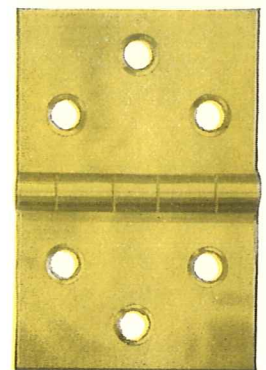
"Narrow" Pattern
Wrought Brass Butt



"Middle" Pattern
Wrought Brass Butt



"Broad" Pattern
Wrought Brass Butt



"Desk" Pattern
Wrought Brass Butt



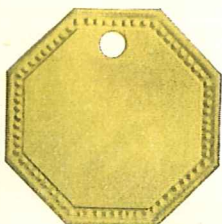
No. 4
Brass Check



No. 1
Brass Check



No. 7
Brass Check



No. 9
Brass Check



No. 51
Brass Check

BRASS CHECKS

MINERS', FACTORY, BAGGAGE AND COAT ROOM

In 5-Pound Packages

Carried in Stock Available for Immediate Shipment

- | | | | | | | | |
|-----|-----|------------|------------------|--------|-------------------------------------|-----|--------------|
| No. | 1. | Round, | $\frac{7}{8}$ " | diam.; | approx. | 124 | to the pound |
| " | 2. | " | $\frac{7}{8}$ " | " | " | 128 | " " " |
| " | 3. | " | $1\frac{3}{8}$ " | " | baggage type with slotted hole; ap- | | |
| " | | | | | prox. | 62 | to the pound |
| " | 4. | " | $\frac{7}{8}$ " | " | approx. | 124 | to the pound |
| " | 7. | " | $1\frac{1}{8}$ " | " | " | 86 | " " " |
| " | 9. | Octagonal, | $1\frac{1}{8}$ " | diam.; | approx. | 88 | to the pound |
| " | 12. | Round, | $1\frac{3}{8}$ " | " | " | 60 | " " " |
| " | 19. | Octagonal, | $1\frac{1}{2}$ " | " | " | 46 | " " " |
| " | 51. | Round, | $1\frac{3}{8}$ " | " | " | 64 | " " " |

RED METAL SASH CHAIN

Stock sizes on reels of 500 ft., Nos. 0, 2, 1 and A.

On reels of 250 ft., No. AA.

COPPER HAMMERS

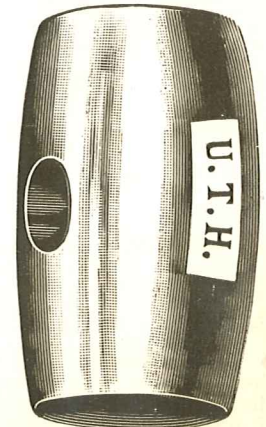
Made from Selected Pure Copper, Smooth Finish and Perfect Faces

$\frac{1}{2}$, 1, $1\frac{1}{2}$, 2, $2\frac{1}{2}$, 3, 4, 5, 6, 8 and 10 pound, without handles.

COPPER FLUE FERRULES

In Packages of 50 and in Cases of 1,000

$\frac{1}{16}$ " Thick; $\frac{5}{8}$ " Wide; $1\frac{3}{4}$ ", $1\frac{7}{8}$ ", 2" Inside Diameter
 $\frac{1}{16}$ " " $\frac{3}{4}$ " " $1\frac{7}{8}$ ", 2" Inside Diameter
 $\frac{1}{32}$ " " $\frac{5}{8}$ " " 2" Inside Diameter



Copper Hammer

U.T. HUNGERFORD



BRASS & COPPER CO.

STAR ★ BRAND

BRASS FLOOR DIVIDING STRIPS

The Following Sizes Are Carried In Our Warehouse Stock Ready For Immediate Shipment

PUNCHED BRASS STRIPS

Type No. 1;	1 1/4" Wide;	19 B. & S. Ga.,	6 Ft. Long;	Single Rect. Wings;	All on one side of strip.
" 2;	1 1/4" "	19 "	6 Ft. "	" "	Alternating on both sides.
" 3;	1 " "	19 "	6 Ft. "	" "	All on one side of strip.
" 4;	1 " "	19 "	6 Ft. "	" "	Alternating on both sides.
" 5;	1 1/4" "	19 "	6 Ft. "	Double "	" "
" 6;	1 " "	19 "	6 Ft. "	" "	" "
" 7;	1 1/4" "	20 "	5 and 6 Ft. Single "	" "	All on one side of strip.

Special types and sizes furnished promptly from mill.

PLAIN BRASS STRIPS

3/4" Wide;	1/16", 3/32", 1/8", 3/16", 1/4",	Thick;	8 to 10 Ft. Long
1 1/4" "	1/16", 3/32", 1/8", 3/16", 1/4",	"	8 to 10 Ft. "
1 1/4" "	1/16", 3/32", 1/8", 3/16", 1/4",	"	8 to 10 Ft. "

The foregoing sizes can be furnished on short notice, punched with anchor holes.

PUNCHED BRASS COVE STRIPS

19 B. & S. Ga. Thick; Any Height up to 7" Base



Punched Brass Strip; Types 1, 3 and 7 (Style only, not accurate to size)



Punched Brass Strip; Types 2 and 4 (Style only, not accurate to size)



Punched Brass Strip; Types 5 and 6 (Style only, not accurate to size)

Careful study of the requirements of the trade has resulted in the development of the foregoing types and sizes of Brass Floor Dividing Strips, all of which are now standard with us, and, as stated, regularly carried in our warehouse stock, ready for immediate shipment.

"Star Brand" Brass Floor Dividing Strips are made from Hard Temper Brass which insures rigidity and prevents curving or warping when handled.

All Hungerford "Star Brand" Strips are put through a special straightening process. Edges are parallel and true.

The use of "Star Brand" Strip assures a substantial reduction in the amount of labor required for setting and grinding.

"Star Brand" Strip is shipped in sturdy wooden cases containing approximately 1,000 lin. feet. Extreme care is exercised in packing to insure safe transit and keep strips in perfect condition.

U.T. HUNGERFORD



BRASS & COPPER CO.

STAR ★ BRAND

BRASS SPELTER SOLDER

For Brazing Copper, Brass, Steel and Cast Iron

Illustrations at the left are actual size of material and show the various kinds we carry on hand in our Warehouses ready for immediate shipment, packed in 100-lb. net bulk cases, neat 1-lb. paper boxes, and in 10- and 25-lb. tin cans with screw top.

Nos. 20 to 26, inclusive, are best adapted for Brazing Copper, Brass and Steel.

Nos. 10 and 12, "XX" Fine Grain, Gray, for Brazing Fine Brass. These grades are free flowing and are especially adapted for Gas Fixture Work and for Brazing Copper Pipe to Brass Fittings.

The requirements of Brazing Solder, especially in connection with copper work for steam purposes, necessitates a quality that can be absolutely relied upon to flow freely and produce maximum strength of seam.

"STAR BRAND" Brass Spelter Solder is used exclusively by many large coppersmiths, ship builders, and other consumers who are technical in their requirements. Where a high-grade Spelter Solder is required, do not fail to give "STAR BRAND" a trial. You will find that it will meet your requirements in every respect.

STAR ★ BRAND

ALUMINUM SOLDER

Carried in stock in triangular shaped sticks of about 2 oz. each

STAR ★ BRAND

SILVER SOLDER

Carried in Stock Ready to Ship

Packed in round Aluminum boxes containing 1 oz. (Troy weight), 12 boxes to a carton, .003" and .004" thick, ½", ⅝", ¾" and 7/8" wide.

STAR ★ BRAND

COPPER FOIL

Carried in Stock Ready to Ship

In Rolls of about 5 lbs., .001" thick (No. 0000), 6" wide.
" " " " 5 lbs., .0015" " (No. 00), 6" "

STAR ★ BRAND

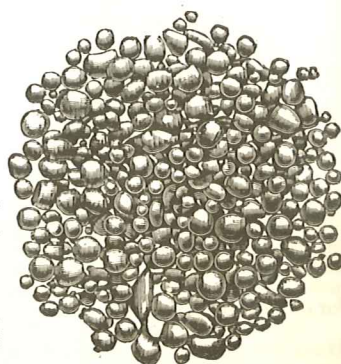
COPPER ALLOY

For Use in
the Manufacture of
Gold and Silver Products

Guaranteed .999% fine or
substantially chemically pure.

Carried in Stock
Ready to Ship

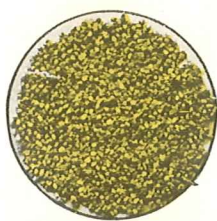
Size No. 2 packed in 10-lb.
paper packages and in bulk
cases of 100 lbs.



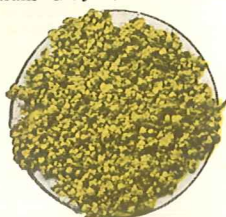
Copper Alloy



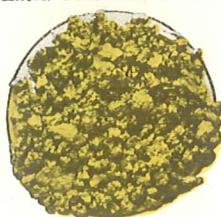
No. 10
Medium Gray Quick Running



No. 26
Extra Fine Round Grain



No. 25
Fine Round Grain



No. 24
Coarse Round Grain



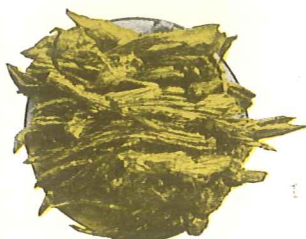
No. 23
Extra Fine Long Grain



No. 22
Fine Long Grain



No. 21
Medium Long Grain



No. 20
Coarse Long Grain



Aluminum Solder.



Silver Solder.



Copper Foil

U.T. HUNGERFORD BRASS & COPPER CO.

1/2 AND 1/2 SOLDER

HUNGERFORD'S BEST
ALSO

STAR BRAND, WARRANTED TINNERS', ANVIL BRAND
AND Nos. 0 and 1 WIPING, COMMERCIAL SOLDERS

Ready for Immediate Shipment from Our Warehouse Stock

In Regulation 1 1/2-lb. bars. Packed in cases of 100 and 250 lbs.

Nos. 0 and 1 Wiping Solder is stocked in 5-lb cakes and in small bars. Wire Solder, 1/8" and No. 11 Stubs Gauge diameter, is stocked in coils of about 25 lbs.

Any mixture of solder in any shape and size of bar or cake can be furnished very promptly to special order. Customer's name can be cast in bars at only a nominal first cost for making the mold.

PURE BLOCK TIN

Carried in Stock in Bars of about 1 1/4 lbs.

ANVIL BRAND

SOLDERING COPPERS

Carried in Stock Ready to Ship

POINTED PATTERN

Packed in cases of 25 pairs of a size

1/2, 3/4, 1, 1 1/2, 2, 2 1/2, 3, 3 1/2, 4, 5, 6, 7, 8, 9, 10 and 12 lbs. to the pair

† Carried only in our Philadelphia stock.

FLAT BOTTOM PATTERN

3, 4, 5, 6 and 8 lbs. to the pair. Packed in cases of 25 pairs of a size.

ROOFING PATTERN

†8, †10 and †12 lbs. to the pair. Packed in cases of 25 pairs of a size.

† Carried only in our Cleveland stock.

SWIVEL HATCHET PATTERN

3, 4, 5 and 6 lbs. to the pair. Packed in cases of 25 pairs of a size.

† RIVETED HANDLE PATTERN

2, 3, 4, 5 and 6 lbs. to the pair. Packed in cases of 25 pairs of a size.

† Carried only in our Philadelphia stock.

BABBITT METALS

Carried in Stock Ready to Ship

"NAVALOY" HEAVY DUTY BABBITT

In 2 lb. cakes

"Navaloy" is a high grade, Tin base Babbitt. It is a composition of only the best virgin metals and is guaranteed not to contain a trace of lead or impurities of any description.

HUNGERFORD "EXTRA" BABBITT

In 5 lb. bars

Where a high-grade Babbitt is required that costs less (by virtue of its formula) than our "Navaloy," we recommend our Hungerford "Extra."

This is a strong, copper-hardened, anti-friction metal. Especially designed for carrying heavy loads at comparatively high speeds.

HUNGERFORD "SPECIAL" BABBITT

In 5 lb. bars

Is a low-priced metal having all the requisite qualities of a Babbitt for low-speed machinery, small, light duty engines, planing mill and wood-working machinery and for miscellaneous light service machine and line shafting work.

PARSON'S WHITE BRASS SA

For marine work under high speed and heavy pressure. This metal will adhere to boxes by tinning. Elastic limit under compression 6,000 lbs. per sq. in.; Brinell hardness 36 to 46. Coefficient of Friction .00801; Load 750 lbs. per sq. in.; Speed on journal surfaces 600 ft. per min.



Hungerford's Best Half and Half Solder



Wire Solder



No. 1 Extra Wiping Solder



Pointed Pattern Soldering Copper



Roofing Pattern Soldering Copper



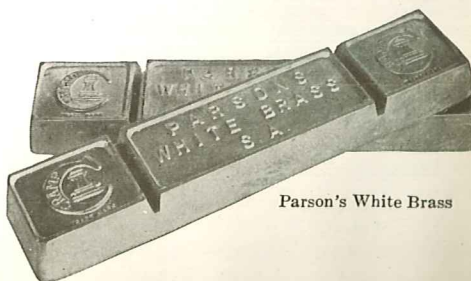
Flat Bottom Soldering Copper



Hungerford Extra Babbitt



"Navaloy" Babbitt



Parson's White Brass

U.T. HUNGERFORD BRASS & COPPER CO.

STAR ★ BRAND

RADIO ACCESSORIES

Ready For Immediate Shipment From Our Warehouse Stock



**HUNGERFORD
"STAR BRAND" ANTENNAE OUTFIT**
Catalog No. 400

Comprises everything necessary for the erection of the highest type of outdoor aerial.



Antennae Wire



**HUNGERFORD
"AIR KING" ANTENNAE OUTFIT**

Catalog No. 300

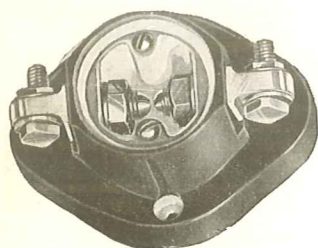
A medium priced Outfit that will give good results with any type of Radio Receiving Set

STAR BRAND COPPER ANTENNAE WIRE

In Coils of 100 Lineal Feet

Packed in Individual Display Cartons.

Cat. No. 6050;	7 Strand	22 Ga.	Plain
" No. 6060;	7 "	22 "	Tinned
" No. 6070;	7 "	22 "	Enameled
" No. 6080;	Solid	14 "	Plain



Surface Type Lightning Arrester
Cat. No. 3041

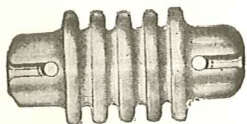
SENSORY LIGHTNING ARRESTERS

Approved by Nat. Bd. of Fire Underwriters

Cat. No. 3107;	Closed	Type
" " 3041;	Surface	"
" " 3016;	Pedestal	"

SENSORY BATTERY SWITCHES

Cat. No. 3055;	Single Pole, Single Throw,	Porcelain Base
" No. 3056;	Double " " "	" "
" No. 3057;	Single " Double " "	" "
" No. 3058;	Double " " "	" "
" No. 3006;	Single " " "	Heavy Type
" No. 3094;	Double " " "	Moulded Base



Insulator Cat. No. 3017

SENSORY ANTENNAE INSULATORS

Cat. No. 3017; Brown Glazed Porcelain

SENSORY PORCELAIN INSULATED SCREW EYES

Cat. No. 3093;	Short Shank
" No. 3099;	Long " (6")

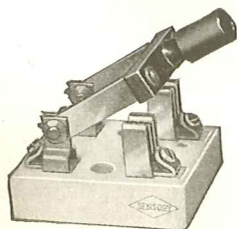
STAR BRAND TINNED COPPER BUS WIRE

$\frac{1}{16}$ " Square;	24" Long
$\frac{1}{16}$ " Round;	24" "

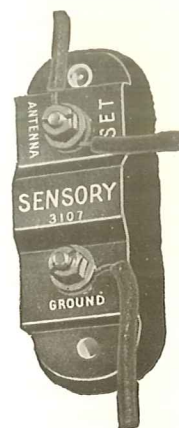
HUNGERFORD ELECTRIC SOLDERING TOOL

A perfect soldering tool for home and light manufacturing uses

Cat. No. 205;	With One Standard Tip
" No. 210;	" One Standard and One Pencil Tip
" No. 220;	" Pencil Tip only



Battery Switch
Cat. No. 3056



Closed Type
Lightning Arrester
Cat. No. 3107



Insulated Screw Eye
Cat. No. 3093



Electric Soldering Tool

U.T. HUNGERFORD BRASS & COPPER CO.

BRASS, COPPER, NICKEL, SILVER, TOBIN AND PHOSPHOR* BRONZE SHEETS

WEIGHT IN POUNDS PER SQUARE FOOT

Thickness			Lbs. per Sq. Ft.		
B. & S. Gauge No.	Decimal Equivalent in Inches	Nearest Fraction in Inches	Copper	Brass	18% Nickel Silver
0000	.4600	29/64+	21.30	20.27	20.95
000	.4096	13/32	18.97	18.05	18.65
00	.3648	23/64+	16.89	16.07	16.61
0	.3249	21/64	15.04	14.31	14.79
1	.2893	19/64—	13.39	12.75	13.17
2	.2576	1/4+	11.93	11.35	11.73
3	.2294	15/64—	10.62	10.11	10.45
4	.2043	13/64	9.460	9.003	9.303
5	.1819	3/16—	8.424	8.017	8.284
6	.1620	5/32+	7.502	7.139	7.377
7	.1443	9/64+	6.681	6.358	6.570
8	.1285	1/8+	5.949	5.662	5.851
9	.1144	7/64+	5.298	5.042	5.210
10	.1019	7/64—	4.718	4.490	4.640
11	.09074	3/32—	4.201	3.998	4.132
12	.08081	5/64+	3.741	3.561	3.679
13	.07196	5/64—	3.332	3.171	3.277
14	.06408	1/16+	2.967	2.824	2.918
15	.05707	1/16—	2.642	2.515	2.598
16	.05082	3/64+	2.353	2.239	2.314
17	.04526	3/64—	2.096	1.994	2.061
18	.04030		1.866	1.776	1.835
19	.03589		1.662	1.582	1.634
20	.03196	1/32+	1.480	1.408	1.455
21	.02846	1/32—	1.318	1.254	1.296
22	.02535		1.174	1.117	1.154
23	.02257		1.045	.9946	1.028
24	.02010		.9307	.8857	.9153
25	.01790		.8288	.7887	.8150
26	.01594	1/64+	.7381	.7024	.7258
27	.01420	1/64—	.6573	.6255	.6461
28	.01264		.5853	.5570	.5756
29	.01126		.5212	.4961	.5126
30	.01003		.4642	.4417	.4565
31	.008928		.4134	.3934	.4065
32	.007950		.3681	.3503	.3620
33	.007080		.3278	.3120	.3224
34	.006305		.2919	.2778	.2871
35	.005615		.2600	.2474	.2557
36	.005000		.2315	.2203	.2277
37	.004453		.2062	.1962	.2027
38	.003965		.1836	.1747	.1805
39	.003531		.1635	.1556	.1608
40	.003145		.1456	.1386	.1432

Thickness in Fractions and Even Inches	Pounds per Square Foot		
	Copper	Brass	Tobin Bronze
1/16	2.894	2.754	2.733
1/8	5.788	5.508	5.465
3/16	8.681	8.261	8.198
1/4	11.58	11.02	10.93
5/16	14.47	13.77	13.66
3/8	17.36	16.52	16.40
7/16	20.25	19.28	19.13
1/2	23.15	22.03	21.86
9/16	26.04	24.78	24.59
5/8	28.94	27.54	27.33
11/16	31.83	30.29	30.06
3/4	34.73	33.05	32.79
13/16	37.62	35.80	35.52
7/8	40.51	38.55	38.26
15/16	43.41	41.31	40.99
1	46.30	44.06	43.72
1 1/16	49.19	46.81	46.45
1 1/8	52.09	49.57	49.19
1 3/16	54.98	52.32	51.92
1 1/4	57.88	55.08	54.65
1 5/16	60.77	57.83	57.38
1 3/8	63.66	60.58	60.12
1 7/16	66.56	63.34	62.85
1 1/2	69.45	66.09	65.58
1 9/16	72.35	68.84	68.31
1 5/8	75.24	71.60	71.05
1 11/16	78.13	74.35	73.78
1 3/4	81.03	77.11	76.51
1 13/16	83.92	79.86	79.24
1 7/8	86.81	82.61	81.98
1 15/16	89.71	85.37	84.71
2	92.60	88.12	87.44

These weights are theoretically correct but variations must be expected in practice.

To determine the weight of Nickel Silver Sheet other than 18%, multiply above weights for 18% Nickel Silver as follows: For 10% multiply by .9912. For 15% multiply by .9862. For 30% multiply by .9985.

* Phosphor Bronze is slightly lighter in weight than pure Copper, but for all practical purposes the above weights of Copper Sheets can be used as equivalent in weight to the same sizes of Phosphor Bronze Sheet.

U.T. HUNGERFORD



BRASS & COPPER CO.

STRIP BRASS

WEIGHT PER 100 LINEAR FEET

For Weight of Copper Strip Add 5%.

B. & S. Gauge	1/8 in.	3/16 in.	1/4 in.	5/16 in.	3/8 in.	7/16 in.	1/2 in.	9/16 in.	5/8 in.	3/4 in.	1 in.	1 1/4 in.	1 1/2 in.	2 in.
4/0	20.508	30.763	41.017	51.271	61.525	71.779	82.033	92.288	102.542	123.05	164.067	205.083	246.1	328.133
3/0	18.264	27.395	36.527	45.659	54.791	63.922	73.054	82.186	91.318	109.581	146.108	182.635	219.163	292.217
2/0	16.264	24.395	32.527	40.659	48.791	56.922	65.054	73.186	81.318	97.581	130.108	162.635	195.163	260.217
0	14.484	21.725	28.967	36.208	43.45	50.692	57.933	65.175	72.417	86.9	115.867	144.833	173.8	231.733
1	12.898	19.347	25.796	32.245	38.694	45.143	51.592	58.041	64.49	77.388	103.183	128.979	154.775	206.367
2	11.486	17.23	22.973	28.716	34.459	40.203	45.946	51.689	57.432	68.919	91.892	114.865	137.838	183.783
3	10.228	15.342	20.456	25.57	30.684	35.797	40.913	46.027	51.141	61.369	81.825	102.281	122.738	163.65
4	9.109	13.664	18.219	22.773	27.328	31.883	36.438	40.992	45.547	54.656	72.875	91.094	109.313	145.75
5	8.113	12.169	16.225	20.281	24.338	28.394	32.45	36.506	40.563	48.675	64.9	81.125	97.35	129.88
6	7.224	10.836	14.448	18.06	21.672	25.284	28.896	32.508	36.12	43.343	57.792	72.224	86.688	115.583
7	6.432	9.648	12.865	16.081	19.297	22.513	25.729	28.945	32.161	38.594	51.458	64.323	77.187	102.917
8	5.728	8.592	11.456	14.32	17.184	20.048	22.913	25.777	28.641	34.369	45.825	57.281	68.738	91.65
9	5.102	7.653	10.204	12.755	15.306	17.857	20.408	22.959	25.51	30.613	40.817	51.021	61.225	81.633
10	4.543	6.814	9.085	11.357	13.628	15.9	18.171	20.442	22.714	27.256	36.342	45.027	54.513	72.683
11	4.046	6.099	8.092	10.115	12.138	14.161	16.183	18.208	20.229	24.275	32.367	40.458	48.55	64.733
12	3.601	5.462	7.202	9.003	10.803	12.604	14.404	16.205	18.005	21.606	28.808	36.01	43.213	57.617
13	3.209	4.813	6.417	8.021	9.625	11.229	12.833	14.438	16.042	19.25	25.667	32.083	38.5	51.333
14	2.857	4.286	5.715	7.143	8.572	10.	11.429	12.858	14.286	17.144	22.858	28.573	34.288	45.717
15	2.544	3.816	5.088	6.359	7.631	8.903	10.175	11.447	12.719	15.263	20.35	25.438	30.525	40.7
16	2.266	3.398	4.531	5.664	6.797	7.93	9.063	10.195	11.328	13.594	18.125	22.656	27.188	36.25
17	2.018	3.027	4.035	5.044	6.053	7.062	8.071	9.08	10.089	12.106	16.142	20.177	24.213	32.283
18	1.797	2.695	3.594	4.492	5.391	6.289	7.188	8.086	8.984	10.781	14.375	17.969	21.563	28.75
19	1.6	2.4	3.2	4.	4.8	5.6	6.4	7.2	8.	9.6	12.	16.	19.2	25.6
20	1.424	2.136	2.848	3.56	4.272	4.984	5.696	6.408	7.12	8.544	11.892	14.24	17.088	22.783
21	1.269	1.903	2.538	3.172	3.806	4.441	5.075	5.71	6.344	7.613	10.15	12.688	15.225	20.3
22	1.13	1.695	2.26	2.826	3.391	3.956	4.521	5.086	5.651	6.781	9.042	11.3	13.563	18.083
23	1.007	1.509	2.013	2.516	3.019	3.522	4.025	4.528	5.031	6.038	8.05	10.063	12.075	16.1
24	.896	1.344	1.792	2.239	2.688	3.135	3.583	4.032	4.479	5.375	7.167	8.959	10.75	14.333
25	.798	1.197	1.596	1.995	2.394	2.793	3.192	3.591	3.99	4.788	6.383	7.978	9.575	12.767
26	.711	1.066	1.421	1.776	2.131	2.486	2.842	3.197	3.552	4.263	5.683	7.104	8.525	11.367
27	.633	.95	1.267	1.583	1.9	2.217	2.533	2.85	3.167	3.8	5.067	6.333	7.6	10.133
28	.564	.845	1.127	1.409	1.691	1.972	2.254	2.536	2.818	3.381	4.508	5.636	6.763	9.017
29	.502	.753	1.004	1.255	1.50	1.757	2.008	2.259	2.51	3.013	4.017	5.021	6.025	8.033
30	.447	.671	.894	1.117	1.341	1.564	1.788	2.001	2.230	2.681	3.575	4.469	5.363	7.150
31	.398	.597	.796	.995	1.194	1.393	1.592	1.791	1.99	2.388	3.183	3.979	4.775	6.367
32	.354	.531	.708	.885	1.062	1.24	1.417	1.594	1.77	2.125	2.833	3.542	4.25	5.667
33	.315	.473	.631	.788	.947	1.105	1.262	1.42	1.578	1.894	2.525	3.156	3.788	5.05
34	.28	.42	.56	.7	.841	.98	1.121	1.261	1.4	1.681	2.202	2.8	3.362	4.483
35	.25	.375	.5	.625	.75	.875	1.	1.125	1.25	1.5	2.	2.5	3.	4.
36	.223	.335	.446	.557	.669	.78	.892	1.003	1.115	1.333	1.783	2.23	2.675	3.567
37	.20	.298	.398	.498	.597	.696	.796	.895	.995	1.194	1.592	1.99	2.388	3.183
38	.177	.266	.354	.443	.531	.62	.708	.797	.885	1.063	1.417	1.771	2.125	2.833
39	.157	.236	.315	.393	.472	.55	.629	.708	.786	.944	1.258	1.573	1.888	2.517
40	.141	.211	.281	.351	.422	.492	.562	.633	.703	.844	1.125	1.406	1.687	2.25

These weights are theoretically correct, but variations must be expected in practice.

U.T.HUNGERFORD



BRASS & COPPER Co.

THICKNESS OF STANDARD COPPER SHEETS

ROLLED TO WEIGHT

DRAWN COPPER BARS

STANDARD RECTANGULAR SIZES

WEIGHT IN POUNDS PER LINEAR FOOT

Weight per Sq. Ft.		Thickness	Nearest Gauge No.		Nearest Fraction
Ounces	Pounds	Inches	B. & S.	Stubs	
.....	16	.3456	00	00	$1\frac{1}{32}$
.....	15	.3240	0	0	$2\frac{1}{64}+$
.....	14	.3024	1	1	$19\frac{1}{64}-$
.....	13	.2808	1	2	$9\frac{3}{32}$
.....	12	.2592	2	3	$1\frac{1}{4}-$
.....	11	.2376	3	4	$15\frac{1}{64}-$
.....	10	.2160	4	5	$7\frac{1}{32}+$
.....	9½	.2052	4	6	$13\frac{1}{64}$
.....	9	.1944	4	6	
.....	8½	.1836	5	7	$3\frac{1}{6}+$
.....	8	.1728	5	8	$11\frac{1}{64}$
.....	7½	.1620	6	8	
.....	7	.1512	7	9	$5\frac{1}{32}+$
.....	6½	.1404	7	10	$9\frac{1}{64}$
.....	6	.1296	8	10	$1\frac{1}{8}-$
.....	5½	.1188	9	11	
80	5	.1080	10	12	$7\frac{1}{64}+$
72	4½	.0972	10	13	$3\frac{1}{32}-$
64	4	.0864	11	14	
56	3½	.0756	13	15	$5\frac{1}{64}+$
48	3	.0648	14	16	$1\frac{1}{6}-$
44	2¾	.0594	15	17	
40	2½	.0540	15	17	
36	2¼	.0486	16	18	$3\frac{1}{64}-$
32	2	.0432	17	19	
28	1¾	.0378	19	20	
24	1½	.0324	20	21	$1\frac{1}{32}-$
20	1¼	.0270	21	22	
18	1⅛	.0243	22	23	
16	1	.0216	23	24	
14	7/8	.0189	25	26	
12	¾	.0162	26	27	$1\frac{1}{64}-$
10	5/8	.0135	27	29	
8	½	.0108	29	31	
6	3/8	.0081	32	33	
4	¼	.0054	35	35	
2	1/8	.0027			

Approximate Weight of Sheet Copper per Square Foot when thickness is given in Fractional Parts of an Inch

1/16 in. thick.....	3	lbs. to the square foot
1/8 in. thick.....	6	lbs. to the square foot
1/4 in. thick.....	12	lbs. to the square foot
1/2 in. thick.....	24	lbs. to the square foot
1 in. thick.....	46½	lbs. to the square foot

The area of a circle is equal to the square of the diameter multiplied by 0.7854. The circumference of a circle is equal to the diameter multiplied by 3.1416.

To Ascertain the Weight of Copper—Find the number of cubic inches in the piece, multiply by 0.3214, and the product will be the weight in pounds. Or, multiply the length and breadth (in feet) and that by the pounds per square foot

Size	Pounds	Size	Pounds	Size	Pounds
1/16 x 1/2	.1206	1/4 x 2	1.929	3/4 x 1	2.894
1/16 x 5/8	.1507	1/4 x 2 1/4	2.170	3/4 x 1 1/4	3.617
1/16 x 3/4	.1809	1/4 x 2 1/2	2.412	3/4 x 1 1/2	4.341
1/16 x 7/8	.2110	1/4 x 2 3/4	2.653	3/4 x 1 3/4	5.064
1/16 x 1	.2412	1/4 x 3	2.894	3/4 x 2	5.788
1/16 x 1 1/4	.3014	3/8 x 1	1.447	3/4 x 2 1/4	6.511
1/16 x 1 1/2	.3617	3/8 x 1 1/4	1.809	3/4 x 2 1/2	7.235
		3/8 x 1 1/2	2.170	3/4 x 2 3/4	7.958
1/8 x 1/2	.2412	3/8 x 1 3/4	2.532	3/4 x 3	8.681
1/8 x 5/8	.3014	3/8 x 2	2.894	3/4 x 3 1/4	9.405
1/8 x 3/4	.3617	3/8 x 2 1/4	3.256	3/4 x 3 1/2	10.13
1/8 x 7/8	.4220	3/8 x 2 1/2	3.617	3/4 x 3 3/4	10.85
1/8 x 1	.4823	3/8 x 2 3/4	3.979	3/4 x 4	11.58
1/8 x 1 1/4	.6029	3/8 x 3	4.341	3/4 x 4 1/4	12.30
1/8 x 1 1/2	.7235	3/8 x 3 1/4	4.702	3/4 x 4 1/2	13.02
1/8 x 1 3/4	.8440	3/8 x 3 1/2	5.064	3/4 x 4 3/4	13.75
1/8 x 2	.9646	3/8 x 4	5.426	3/4 x 5	14.47
1/8 x 2 1/4	1.085	3/8 x 4 1/4	5.788	3/4 x 5 1/4	15.19
1/8 x 2 1/2	1.206	3/8 x 4 1/2	6.149	3/4 x 5 1/2	15.92
1/8 x 2 3/4	1.326	3/8 x 4 3/4	6.511	3/4 x 5 3/4	16.64
1/8 x 3	1.447	3/8 x 5	6.873	3/4 x 6	17.36
			7.235		
3/16 x 1/2	.3617	1/2 x 1	1.929	1 x 1	3.858
3/16 x 5/8	.4522	1/2 x 1 1/4	2.412	1 x 1 1/4	4.823
3/16 x 3/4	.5426	1/2 x 1 1/2	2.894	1 x 1 1/2	5.788
3/16 x 7/8	.6330	1/2 x 1 3/4	3.376	1 x 1 3/4	6.752
3/16 x 1	.7235	1/2 x 2	3.858	1 x 2	7.717
3/16 x 1 1/4	.9043	1/2 x 2 1/4	4.341	1 x 2 1/4	8.681
3/16 x 1 1/2	1.085	1/2 x 2 1/2	4.823	1 x 2 1/2	9.646
3/16 x 1 3/4	1.266	1/2 x 2 3/4	5.305	1 x 2 3/4	10.61
3/16 x 2	1.447	1/2 x 3	5.788	1 x 3	11.58
3/16 x 2 1/4	1.628	1/2 x 3 1/4	6.270	1 x 3 1/4	12.54
3/16 x 2 1/2	1.809	1/2 x 3 1/2	6.752	1 x 3 1/2	13.50
3/16 x 2 3/4	1.989	1/2 x 3 3/4	7.235	1 x 3 3/4	14.47
3/16 x 3	2.170	1/2 x 4	7.717	1 x 4	15.43
		1/2 x 4 1/4	8.199	1 x 4 1/4	16.40
1/4 x 1/2	.4823	1/2 x 4 1/2	8.681	1 x 4 1/2	17.36
1/4 x 5/8	.6029	1/2 x 4 3/4	9.164	1 x 4 3/4	18.33
1/4 x 3/4	.7235	1/2 x 5	9.646	1 x 5	19.29
1/4 x 7/8	.8440	1/2 x 5 1/4	10.13	1 x 5 1/4	20.26
1/4 x 1	.9646	1/2 x 5 1/2	10.61	1 x 5 1/2	21.22
1/4 x 1 1/4	1.206	1/2 x 5 3/4	11.09	1 x 5 3/4	22.19
1/4 x 1 1/2	1.447	1/2 x 6	11.58	1 x 6	23.15
1/4 x 1 3/4	1.688				

These weights are theoretically correct, but variations must be expected in practice.

U. T. HUNGERFORD BRASS & COPPER CO.

SEAMLESS BRASS TUBE

WEIGHT IN POUNDS PER LINEAR FOOT

Stubbs Gauge: Outside Diameters. (To ascertain the weights of Seamless Copper Tube, add 5 per cent to the weights of Brass Tube).

Gauge No.	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27
Wall Thickness in Decimal parts of inch	.259	.238	.220	.203	.180	.165	.148	.134	.120	.109	.095	.083	.072	.065	.058	.049	.042	.035	.032	.028	.025	.022	.020	.018	.016
Frac. of in., corresponding closely to Gauge Nos.	1/4	15/64	13/64	11/64	9/64	7/64	5/64	3/64	1/8	.....	3/32	5/64	.....	1/16	.....	3/64	.....	.....	1/32	.....	.....	.....	.....	.....	1/64
Outside Diam., inches	1.09	1.28	1.47	1.66	1.85	2.04	2.23	2.42	2.61	2.80	2.99	3.18	3.37	3.56	3.75	3.94	4.13	4.32	4.51	4.70	4.89	5.08	5.27	5.46	5.65
1 1/8	1.09	1.28	1.47	1.66	1.85	2.04	2.23	2.42	2.61	2.80	2.99	3.18	3.37	3.56	3.75	3.94	4.13	4.32	4.51	4.70	4.89	5.08	5.27	5.46	5.65
1 1/4	1.28	1.47	1.66	1.85	2.04	2.23	2.42	2.61	2.80	2.99	3.18	3.37	3.56	3.75	3.94	4.13	4.32	4.51	4.70	4.89	5.08	5.27	5.46	5.65	5.84
1 1/2	1.47	1.66	1.85	2.04	2.23	2.42	2.61	2.80	2.99	3.18	3.37	3.56	3.75	3.94	4.13	4.32	4.51	4.70	4.89	5.08	5.27	5.46	5.65	5.84	6.03
1 3/4	1.66	1.85	2.04	2.23	2.42	2.61	2.80	2.99	3.18	3.37	3.56	3.75	3.94	4.13	4.32	4.51	4.70	4.89	5.08	5.27	5.46	5.65	5.84	6.03	6.22
1 7/8	1.85	2.04	2.23	2.42	2.61	2.80	2.99	3.18	3.37	3.56	3.75	3.94	4.13	4.32	4.51	4.70	4.89	5.08	5.27	5.46	5.65	5.84	6.03	6.22	6.41
2	2.04	2.23	2.42	2.61	2.80	2.99	3.18	3.37	3.56	3.75	3.94	4.13	4.32	4.51	4.70	4.89	5.08	5.27	5.46	5.65	5.84	6.03	6.22	6.41	6.60
2 1/8	2.23	2.42	2.61	2.80	2.99	3.18	3.37	3.56	3.75	3.94	4.13	4.32	4.51	4.70	4.89	5.08	5.27	5.46	5.65	5.84	6.03	6.22	6.41	6.60	6.79
2 1/4	2.42	2.61	2.80	2.99	3.18	3.37	3.56	3.75	3.94	4.13	4.32	4.51	4.70	4.89	5.08	5.27	5.46	5.65	5.84	6.03	6.22	6.41	6.60	6.79	6.98
2 1/2	2.61	2.80	2.99	3.18	3.37	3.56	3.75	3.94	4.13	4.32	4.51	4.70	4.89	5.08	5.27	5.46	5.65	5.84	6.03	6.22	6.41	6.60	6.79	6.98	7.17
2 3/4	2.80	2.99	3.18	3.37	3.56	3.75	3.94	4.13	4.32	4.51	4.70	4.89	5.08	5.27	5.46	5.65	5.84	6.03	6.22	6.41	6.60	6.79	6.98	7.17	7.36
2 7/8	2.99	3.18	3.37	3.56	3.75	3.94	4.13	4.32	4.51	4.70	4.89	5.08	5.27	5.46	5.65	5.84	6.03	6.22	6.41	6.60	6.79	6.98	7.17	7.36	7.55
3	3.18	3.37	3.56	3.75	3.94	4.13	4.32	4.51	4.70	4.89	5.08	5.27	5.46	5.65	5.84	6.03	6.22	6.41	6.60	6.79	6.98	7.17	7.36	7.55	7.74
3 1/8	3.37	3.56	3.75	3.94	4.13	4.32	4.51	4.70	4.89	5.08	5.27	5.46	5.65	5.84	6.03	6.22	6.41	6.60	6.79	6.98	7.17	7.36	7.55	7.74	7.93
3 1/4	3.56	3.75	3.94	4.13	4.32	4.51	4.70	4.89	5.08	5.27	5.46	5.65	5.84	6.03	6.22	6.41	6.60	6.79	6.98	7.17	7.36	7.55	7.74	7.93	8.12
3 1/2	3.75	3.94	4.13	4.32	4.51	4.70	4.89	5.08	5.27	5.46	5.65	5.84	6.03	6.22	6.41	6.60	6.79	6.98	7.17	7.36	7.55	7.74	7.93	8.12	8.31
3 3/4	3.94	4.13	4.32	4.51	4.70	4.89	5.08	5.27	5.46	5.65	5.84	6.03	6.22	6.41	6.60	6.79	6.98	7.17	7.36	7.55	7.74	7.93	8.12	8.31	8.50
3 7/8	4.13	4.32	4.51	4.70	4.89	5.08	5.27	5.46	5.65	5.84	6.03	6.22	6.41	6.60	6.79	6.98	7.17	7.36	7.55	7.74	7.93	8.12	8.31	8.50	8.69
4	4.32	4.51	4.70	4.89	5.08	5.27	5.46	5.65	5.84	6.03	6.22	6.41	6.60	6.79	6.98	7.17	7.36	7.55	7.74	7.93	8.12	8.31	8.50	8.69	8.88

To Determine Weight Per Foot of a Tube of a Given Inside Diameter, Add to Weights in These Lists the Weights Given Under Corresponding Gauge Numbers Below.

Gauge No.	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27
Increase in lbs. per foot	1.5487	1.3077	1.1174	.9514	.7480	.6285	.5057	.4145	.3324	.2743	.2034	.1590	.1197	.0975	.0777	.0554	.0407	.0283	.0236	.0181	.0144	.0112	.0092	.0075	.0059



SEAMLESS BRASS TUBE—Continued

WEIGHTS IN POUNDS PER LINEAR FOOT

Stubs Gauge: Outside Diameters (To ascertain the weights of Seamless Copper Tube, add 5 per cent to the weights of Brass Tube)

Gauge No.	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24
Wall Thickness in Decimal parts of inch	.259	.238	.220	.203	.180	.165	.148	.134	.120	.109	.095	.083	.072	.065	.058	.049	.042	.035	.032	.028	.025	.022
Frac. of inch, corresponding closely to Gauge Nos.	$\frac{1}{4}$	$\frac{15}{64}$	.....	$\frac{13}{64}$	$\frac{3}{16}$	$\frac{11}{64}$	$\frac{9}{64}$	.....	$\frac{1}{8}$	.....	$\frac{3}{32}$	$\frac{5}{64}$	.....	$\frac{1}{16}$	.....	$\frac{3}{64}$	.....	.....	$\frac{1}{32}$	.....	.....	.....
Outside Diam., inches																						
4	11.21	10.36	9.62	8.92	7.95	7.32	6.59	5.99	5.39	4.91	4.29	3.76	3.27	2.96	2.64	2.24	1.92	1.606	1.469	1.287	1.147	1.010
$4\frac{1}{8}$	11.57	10.68	9.91	9.19	8.20	7.54	6.79	6.17	5.55	5.05	4.42	3.87	3.37	3.05	2.72	2.30	1.98	1.651	1.512	1.324	1.183	1.046
$4\frac{1}{4}$	11.96	11.05	10.26	9.50	8.47	7.80	7.02	6.38	5.73	5.22	4.59	4.01	3.48	3.15	2.81	2.38	2.04	1.707	1.562	1.368	1.219	1.076
$4\frac{3}{8}$	12.32	11.36	10.55	9.77	8.72	8.02	7.22	6.56	5.89	5.37	4.69	4.11	3.58	3.23	2.89	2.45	2.10	1.752	1.604	1.405	1.255	1.111
$4\frac{1}{2}$	12.71	11.74	10.89	10.09	9.00	8.27	7.45	6.77	6.08	5.54	4.84	4.24	3.69	3.33	2.98	2.52	2.16	1.808	1.654	1.449	1.291	1.146
$4\frac{3}{4}$	13.06	12.05	11.18	10.36	9.24	8.50	7.65	6.94	6.24	5.68	4.97	4.36	3.78	3.42	3.06	2.59	2.22	1.853	1.697	1.486	1.326	1.180
$4\frac{7}{8}$	13.41	12.34	11.42	10.55	9.36	8.60	7.72	6.98	6.24	5.65	4.93	4.31	3.71	3.34	2.97	2.50	2.12	1.741	1.583	1.369	1.207	1.060
5	13.76	12.64	11.68	10.76	9.51	8.71	7.80	7.03	6.24	5.62	4.88	4.24	3.62	3.24	2.86	2.38	2.00	1.617	1.457	1.241	1.077	0.930
$5\frac{1}{8}$	14.11	13.11	12.11	11.17	10.04	9.23	8.30	7.54	6.72	6.07	5.31	4.64	4.00	3.61	3.22	2.73	2.34	1.954	1.789	1.566	1.399	1.250
$5\frac{1}{4}$	14.46	13.42	12.45	11.53	10.28	9.45	8.50	7.72	6.93	6.31	5.52	4.83	4.20	3.79	3.39	2.87	2.46	2.055	1.881	1.607	1.437	1.285
$5\frac{3}{8}$	14.81	13.80	12.80	11.85	10.56	9.71	8.73	7.93	7.12	6.48	5.66	4.96	4.31	3.90	3.48	2.95	2.53	2.121	1.932	1.654	1.481	1.326
$5\frac{1}{2}$	15.16	14.11	13.09	12.12	10.79	9.92	8.93	8.11	7.28	6.62	5.79	5.07	4.41	3.98	3.56	3.01	2.58	2.156	1.974	1.691	1.514	1.356
$5\frac{3}{4}$	15.51	14.44	13.44	12.44	11.08	10.18	9.16	8.32	7.47	6.80	5.94	5.20	4.52	4.09	3.65	3.09	2.65	2.213	2.024	1.735	1.556	1.400
$5\frac{7}{8}$	15.86	14.80	13.72	12.70	11.31	10.40	9.35	8.49	7.62	6.94	6.07	5.31	4.61	4.17	3.73	3.15	2.71	2.257	2.064	1.771	1.589	1.430
6	16.21	15.18	14.06	13.03	11.60	10.66	9.59	8.71	7.81	7.11	6.21	5.44	4.73	4.27	3.82	3.23	2.77	2.314	2.117	1.820	1.635	1.474
$6\frac{1}{8}$	16.56	15.48	14.36	13.29	11.83	10.88	9.78	8.88	7.97	7.25	6.34	5.55	4.82	4.36	3.89	3.29	2.83	2.358	2.157	1.858	1.669	1.505
$6\frac{1}{4}$	16.91	15.81	14.67	13.58	12.09	11.14	10.02	9.09	8.16	7.43	6.49	5.68	4.94	4.46	3.99	3.37	2.89	2.416	2.211	1.909	1.716	1.549
$6\frac{3}{8}$	17.26	16.15	14.99	13.86	12.34	11.38	10.24	9.30	8.35	7.61	6.65	5.82	5.05	4.55	4.07	3.46	2.97	2.486	2.277	1.971	1.774	1.604
$6\frac{1}{2}$	17.61	16.48	15.31	14.16	12.61	11.64	10.48	9.52	8.55	7.79	6.81	6.04	5.24	4.72	4.23	3.61	3.11	2.616	2.403	2.094	1.894	1.721
$6\frac{3}{4}$	17.96	16.81	15.62	14.44	12.86	11.88	10.70	9.72	8.73	7.95	6.95	6.15	5.33	4.80	4.30	3.67	3.16	2.656	2.439	2.127	1.923	1.746
7	18.31	17.14	15.93	14.72	13.11	12.12	10.92	9.92	8.91	8.11	7.10	6.28	5.44	4.90	4.39	3.76	3.24	2.726	2.505	2.189	1.981	1.799
$7\frac{1}{8}$	18.66	17.46	16.23	15.00	13.36	12.35	11.13	10.12	9.09	8.27	7.24	6.40	5.55	5.00	4.48	3.84	3.31	2.796	2.571	2.251	2.038	1.852
$7\frac{1}{4}$	19.01	17.79	16.54	15.29	13.62	12.59	11.35	10.32	9.28	8.44	7.40	6.54	5.67	5.11	4.58	3.93	3.39	2.871	2.641	2.316	2.100	1.912
$7\frac{3}{8}$	19.36	18.13	16.86	15.59	13.90	12.86	11.60	10.56	9.50	8.64	7.58	6.70	5.81	5.24	4.70	4.04	3.50	2.976	2.741	2.411	2.191	1.999
$7\frac{1}{2}$	19.71	18.46	17.17	15.88	14.16	13.11	11.83	10.77	9.69	8.81	7.73	6.83	5.92	5.34	4.79	4.12	3.57	3.041	2.801	2.466	2.241	2.044
$7\frac{3}{4}$	20.06	18.79	17.48	16.17	14.42	13.35	12.05	11.00	9.90	9.00	7.90	7.00	6.07	5.48	4.92	4.24	3.68	3.141	2.896	2.556	2.326	2.124
8	20.41	19.12	17.79	16.46	14.68	13.59	12.26	11.19	10.08	9.16	8.04	7.12	6.18	5.58	5.01	4.31	3.74	3.191	2.941	2.596	2.361	2.154
$8\frac{1}{8}$	20.76	19.45	18.11	16.77	14.96	13.85	12.51	11.42	10.29	9.36	8.23	7.30	6.35	5.74	5.16	4.45	3.87	3.316	3.061	2.711	2.471	2.259
$8\frac{1}{4}$	21.11	19.78	18.43	17.08	15.24	14.12	12.76	11.65	10.51	9.57	8.43	7.49	6.53	5.91	5.32	4.60	4.02	3.456	3.201	2.846	2.601	2.384
$8\frac{3}{8}$	21.46	20.09	18.72	17.36	15.49	14.35	12.97	11.84	10.69	9.74	8.58	7.63	6.66	6.03	5.43	4.70	4.11	3.541	3.281	2.921	2.671	2.454
$8\frac{1}{2}$	21.81	20.42	19.03	17.66	15.76	14.61	13.21	12.06	10.89	9.92	8.74	7.77	6.79	6.15	5.54	4.80	4.20	3.626	3.361	3.001	2.746	2.524
$8\frac{3}{4}$	22.16	20.75	19.34	17.96	16.03	14.86	13.44	12.27	11.08	10.10	8.91	7.92	6.93	6.28	5.66	4.91	4.30	3.721	3.456	3.091	2.831	2.609
9	22.51	21.09	19.66	18.26	16.31	15.12	13.68	12.49	11.28	10.28	9.07	8.06	7.05	6.39	5.76	5.00	4.38	3.796	3.526	3.156	2.891	2.664

SEAMLESS BRASS TUBE

RULE FOR CALCULATING APPROXIMATE WEIGHT PER LINEAR FOOT OF ANY SIZE NOT LISTED ABOVE
 (Outside Diameter in inches, plus Inside Diameter in inches) multiplied by (Wall Thickness or Gauge in inches) and multiply the sum total by 5.77
 For example: To find the weight of $2\frac{1}{8}$ " O. D., 14 Stubs Ga. Seamless Brass Tube
 Outside Dia. 2.0625"
 Inside " 1.8965"

$$3.9590 \times .083" (14 \text{ Stubs Ga.}) = .328597 \times 5.77 = \text{Ans. } 1.896 \text{ Lbs. per linear Foot.}$$

U.T. HUNGERFORD BRASS & COPPER CO.

Weight of BRAZED BRASS TUBES

B. & S. Gauge	Decimal Equiv. Inches	Outside Diameter in Inches and Weight in Pounds per Foot																	
		1⁄8	3⁄16	1⁄4	5⁄16	3⁄8	1⁄2	5⁄8	3⁄4	1	1 1⁄4	1 1⁄2	1 3⁄4	2	2 1⁄4	2 1⁄2	2 3⁄4	3	
No. 12	.08081	....	....	....	....	....	....	.515	.633	.870	1.106	1.343	1.579	1.816	2.052	2.289	2.525	2.762
13	.07196	....	....	....	....	....	....	.466	.571	.782	.993	1.203	1.414	1.625	1.835	2.046	2.257	2.467
14	.06408	....	....	....	....	.233	.327	.421	.515	.702	.890	1.077	1.265	1.453	1.640	1.828	2.015	2.203
15	.05707	....	....	....	.171	.212	.296	.380	.463	.630	.797	.964	1.131	1.298	1.465	1.632	1.799	1.966
16	.05082	....	....	.119	.156	.193	.267	.342	.416	.565	.714	.862	1.011	1.160	1.309	1.457	1.606	1.755
17	.04526	....	....	.109	.142	.175	.241	.307	.373	.506	.638	.771	.903	1.036	1.168	1.301	1.433	1.566
18	.04030	....	.069	.099	.128	.158	.217	.276	.335	.453	.571	.689	.807	.925	1.043	1.161	1.279	1.397
19	.03589	....	.064	.090	.116	.143	.195	.248	.300	.405	.510	.615	.720	.825	.930	1.036	1.141	1.246
20	.03196	.035	.058	.082	.105	.128	.175	.222	.269	.362	.456	.549	.643	.737	.830	....	....	....
21	.02846	.032	.053	.074	.095	.115	.157	.199	.240	.324	.407	.490	.574	.657	....	....	....	....
22	.02535	.030	.048	.067	.085	.104	.141	.178	.215	.289	.363	.438	.512	.586	....	....	....	....
23	.02257	.027	.044	.060	.077	.093	.126	.159	.192	.258	.324	.390	.457	....	....	....	....	....
24	.02010	.025	.039	.054	.069	.084	.113	.142	.172	.231	.289	.348	.407	....	....	....	....	....

Weight of COPPER, BRASS, IRON AND STEEL WIRE

B. & S. Gauge No.	Decimal equiv., inch	Weight of wire per 1000 linear feet			
		Wrought iron, pounds	Steel, pounds	Copper, pounds	Brass, pounds
0000	.46000	560.74	566.03	640.5	610.2
000	.40964	444.68	448.88	507.9	483.9
00	.36480	352.66	355.99	402.8	383.8
0	.32486	279.67	282.30	319.5	304.4
1	.28930	221.79	223.89	253.3	241.4
2	.25763	175.89	177.55	200.9	191.4
3	.22942	139.48	140.80	159.3	151.8
4	.20431	110.62	111.66	126.4	120.4
5	.18194	87.720	88.548	100.2	95.47
6	.16202	69.565	70.221	79.46	75.71
7	.14428	55.165	55.685	63.02	60.04
8	.12849	43.751	44.164	49.98	47.61
9	.11443	34.699	35.026	39.63	37.76
10	.10189	27.512	27.772	31.43	29.94
11	.090742	21.820	22.026	24.92	23.75
12	.080808	17.304	17.468	19.77	18.83
13	.071961	13.722	13.851	15.68	14.93
14	.064084	10.886	10.989	12.43	11.84
15	.057068	8.631	8.712	9.858	9.393
16	.050820	6.845	6.909	7.818	7.449
17	.045257	5.427	5.478	6.200	5.907
18	.040303	4.304	4.344	4.917	4.684
19	.035890	2.413	2.445	3.899	3.715
20	.031961	2.708	2.734	3.092	2.946
21	.028462	2.147	2.167	2.452	2.336
22	.025347	1.703	1.719	1.945	1.853
23	.022571	1.350	1.363	1.542	1.469
24	.020100	1.071	1.081	1.223	1.165
25	.017900	.8491	.8571	.9699	.9241
26	.01594	.6734	.6797	.7692	.7328
27	.014195	.5340	.5391	.6100	.5812
28	.012641	.4235	.4275	.4837	.4609
29	.011257	.3358	.3389	.3836	.3655
30	.010025	.2663	.2688	.3042	.2898
31	.008928	.2113	.2132	.2413	.2299
32	.007950	.1675	.1691	.1913	.1823
33	.007080	.1328	.1341	.1517	.1446
34	.006304	.1053	.1063	.1203	.1146
35	.005614	.08366	.08445	.09542	.09092
36	.005000	.06625	.06687	.07568	.07210
37	.004453	.05255	.05304	.06001	.05718
38	.003965	.04166	.04205	.04759	.04535
39	.003531	.03305	.03336	.03774	.03596
40	.003144	.02620	.02644	.02993	.02852
Specific gravity		7.7747	7.848	8.89	8.469
Weight cubic foot		485.874	490.45	555.	528.7

These weights are theoretically correct, but variations must be expected in practice.

U.T.HUNGERFORD



BRASS & COPPER CO.

BRASS, COPPER AND TOBIN BRONZE RODS

WEIGHT IN POUNDS PER LINEAR FOOT.

Diameter in inches	Brass			Copper			Tobin Bronze			Diameter in inches
	Round	Square	Hexagon	Round	Square	Hexagon	Round	Square	Hexagon	
1/16	.01132	.01441	.01248	.01184	.01507	.01305	.01118	.01423	.01233	1/16
1/8	.04527	.05764	.04992	.04735	.06029	.05221	.04471	.05693	.04930	1/8
3/16	.1019	.1297	.1123	.1065	.1356	.1175	.1006	.1281	.1109	3/16
1/4	.1811	.2306	.1997	.1894	.2412	.2088	.1788	.2277	.1972	1/4
5/16	.2829	.3602	.3120	.2959	.3768	.3263	.2794	.3558	.3081	5/16
3/8	.4074	.5188	.4493	.4261	.5426	.4699	.4024	.5124	.4437	3/8
7/16	.5546	.7061	.6115	.5800	.7386	.6396	.5477	.6974	.6039	7/16
1/2	.7243	.9222	.7987	.7576	.9646	.8354	.7154	.9108	.7888	1/2
9/16	.9167	1.167	1.011	.9588	1.221	1.057	.9054	1.153	.9983	9/16
5/8	1.132	1.441	1.248	1.184	1.507	1.305	1.118	1.423	1.232	5/8
11/16	1.369	1.744	1.510	1.432	1.824	1.579	1.353	1.722	1.491	11/16
3/4	1.630	2.075	1.797	1.705	2.170	1.880	1.610	2.049	1.775	3/4
7/8	1.913	2.435	2.109	2.001	2.547	2.206	1.889	2.405	2.083	7/8
15/16	2.218	2.824	2.446	2.320	2.954	2.558	2.191	2.789	2.416	15/16
1	2.546	3.242	2.808	2.663	3.391	2.937	2.515	3.202	2.773	1
1 1/16	2.897	3.689	3.195	3.030	3.858	3.341	2.862	3.643	3.155	1 1/16
1 1/8	3.271	4.164	3.607	3.421	4.356	3.772	3.230	4.113	3.562	1 1/8
1 1/4	3.667	4.669	4.043	3.835	4.883	4.229	3.622	4.611	3.993	1 1/4
1 3/8	4.086	5.202	4.505	4.273	5.441	4.712	4.035	5.138	4.449	1 3/8
1 1/2	4.527	5.764	4.992	4.735	6.029	5.221	4.471	5.693	4.930	1 1/2
1 5/8	4.991	6.355	5.503	5.220	6.647	5.756	4.929	6.276	5.435	1 5/8
1 3/4	5.478	6.974	6.040	5.729	7.295	6.317	5.410	6.888	5.965	1 3/4
1 7/8	5.987	7.623	6.602	6.262	7.973	6.905	5.913	7.529	6.520	1 7/8
2	6.519	8.300	7.188	6.818	8.681	7.518	6.438	8.198	7.099	2
2 1/16	7.073	9.006	7.800	7.398	9.420	8.158	6.986	8.895	7.703	2 1/16
2 1/8	7.651	9.741	8.436	8.002	10.19	8.824	7.556	9.621	8.332	2 1/8
2 1/4	8.250	10.50	9.097	8.630	10.99	9.515	8.149	10.38	8.985	2 1/4
2 3/8	8.873	11.30	9.784	9.281	11.82	10.23	8.763	11.16	9.663	2 3/8
2 1/2	9.518	12.12	10.50	9.955	12.68	10.98	9.401	11.97	10.37	2 1/2
2 5/8	10.19	12.97	11.23	10.65	13.56	11.75	10.06	12.81	11.09	2 5/8
2 3/4	10.88	13.85	11.99	11.38	14.48	12.54	10.74	13.68	11.84	2 3/4
2 7/8	11.59	14.76	12.78	12.12	15.43	13.37	11.45	14.57	12.62	2 7/8
3	13.08	16.66	14.43	13.68	17.42	15.09	12.92	16.45	14.25	3
3 1/16	14.67	18.68	16.17	15.34	19.53	16.92	14.49	18.44	15.97	3 1/16
3 1/8	16.34	20.81	18.02	17.09	21.76	18.85	16.14	20.55	17.80	3 1/8
3 1/4	18.11	23.06	19.97	18.94	24.12	20.88	17.88	22.77	19.72	3 1/4
3 1/2	19.96	25.42	22.01	20.88	26.59	23.02	19.72	25.11	21.74	3 1/2
3 3/4	21.91	27.90	24.16	22.92	29.18	25.27	21.64	27.55	23.86	3 3/4
4	23.95	30.49	26.41	25.05	31.89	27.62	23.65	30.12	26.08	4
4 1/16	26.08	33.20	28.75	27.27	34.73	30.07	25.75	32.79	28.40	4 1/16
4 1/8	28.01	36.02	31.20	29.59	37.68	32.63	27.94	35.58	30.81	4 1/8
4 1/4	30.06	38.99	33.81	31.84	40.74	35.34	30.24	38.63	33.33	4 1/4
4 3/8	32.27	42.06	36.54	34.27	43.99	38.19	32.65	41.84	36.05	4 3/8
4 1/2	34.71	45.34	39.49	36.81	47.46	41.23	35.19	45.29	38.65	4 1/2
4 3/4	37.30	48.94	42.61	39.49	51.17	44.54	37.87	48.94	41.37	4 3/4
5	40.15	52.81	46.06	42.30	55.12	48.07	40.74	52.81	44.37	5
5 1/16	43.18	56.96	49.77	45.34	59.34	51.81	43.77	56.96	47.40	5 1/16
5 1/8	46.39	61.39	53.76	48.54	63.94	55.87	46.96	61.39	50.48	5 1/8
5 1/4	49.77	66.12	58.06	51.91	68.94	60.17	50.34	66.12	53.86	5 1/4
5 3/8	53.34	71.17	62.71	55.46	74.34	64.71	53.91	71.17	57.40	5 3/8
5 1/2	57.12	76.54	67.66	59.17	80.06	69.54	57.62	76.54	61.17	5 1/2
5 3/4	61.17	82.27	72.81	63.06	86.12	74.54	61.54	82.27	65.17	5 3/4
6	65.46	88.34	78.17	67.12	92.54	80.07	65.62	88.34	69.34	6

These weights are theoretically correct, but variations must be expected in practice.

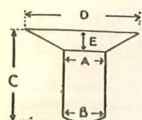
WEIGHT OF PHOSPHOR BRONZE RODS

Phosphor Bronze is slightly lighter in weight than pure Copper but for all practical purposes the above weights of Copper Rod can be used as equivalent to the same sizes of Phosphor Bronze Rod.

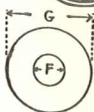
U.T.HUNGERFORD



BRASS & COPPER CO.



APPROXIMATE DIMENSIONS
"STAR BRAND"
COPPER
BELT RIVETS AND BURS



COPPER BELT RIVETS AND BURS

Number to the Pound

RIVETS							BURS			
Rivet Gauge No.	(A) Dia. of Shank Under Head	(B) Dia. at End of Shank	(C) Lengths Made	(D) Dia. of Head	(E) Thickness of Head	Dia. of Wire Used in Making	(F) Inside Dia.	(G) Outside Dia.	Thickness	Number to Pound
3	.....	.....	.....	.....	.....	.....	.300	$59\frac{5}{64}$	.081	64
4	.270	.255	$\frac{3}{8}$ to $2\frac{1}{2}$	$1\frac{5}{16}$	.110	.265	.256	$\frac{7}{8}$	.071	76
5	.240	.222	$\frac{3}{8}$ to $2\frac{1}{2}$	$2\frac{3}{32}$	.105	.241	.223	$5\frac{5}{64}$	.064	88
6	.228	.205	$\frac{1}{4}$ to $2\frac{1}{2}$	$\frac{11}{16}$	.090	.220	.206	$2\frac{1}{32}$	.057	184
7	.191	.175	$\frac{1}{4}$ to $2\frac{1}{2}$	$1\frac{9}{32}$	.070	.181	.177	$1\frac{7}{32}$	.050	352
8	.181	.165	$\frac{1}{4}$ to $2\frac{1}{2}$	$\frac{1}{2}$	.063	.171	.166	$1\frac{5}{32}$	.045	400
9	.161	.145	$\frac{1}{4}$ to $2\frac{1}{2}$	$1\frac{5}{32}$	.058	.151	.146	$\frac{7}{16}$	.040	560
10	.151	.137	$\frac{1}{4}$ to $2\frac{1}{2}$	$\frac{7}{16}$	.055	.141	.138	$1\frac{1}{32}$	.036	768
11	.141	.127	$\frac{1}{4}$ to 2	$1\frac{1}{32}$	.050	.131	.128	$\frac{3}{8}$	.031	928
12	.137	.123	$\frac{1}{4}$ to 2	$\frac{3}{8}$	.045	.127	.124	$2\frac{3}{64}$	.028	1024
13	.118	.105	$\frac{3}{16}$ to $1\frac{1}{4}$	$1\frac{1}{32}$	.040	.111	.106	$1\frac{1}{32}$	.025	1472
14	.102	.092	$\frac{5}{32}$ to 1	$\frac{5}{16}$	.030	.095	.093	$\frac{5}{16}$	.022	2048
15	.090	.085	$\frac{5}{32}$ to 1	$\frac{1}{4}$	.025	.087	.086	$\frac{3}{32}$	.020	3592
16	.....	.....	.....	.....	.....	.....	.068	$1\frac{1}{64}$	.017	4160

Copper Belt Rivets Only														Burs only
No.	$\frac{1}{4}$ "	$\frac{5}{16}$ "	$\frac{3}{8}$ "	$\frac{7}{16}$ "	$\frac{1}{2}$ "	$\frac{5}{8}$ "	$\frac{3}{4}$ "	$\frac{7}{8}$ "	1"	$1\frac{1}{8}$ "	$1\frac{1}{4}$ "	$1\frac{1}{2}$ "		
4	.....	.....	.....	.....	48	.....	46	43	41	34	32	30	26	76
5	.....	.....	.....	.....	64	60	56	50	48	44	40	36	32	88
6	.....	.....	128	110	90	88	78	68	64	56	52	48	44	184
7	208	192	168	158	152	124	120	104	96	88	80	72	64	352
8	246	240	208	200	168	152	136	120	104	96	88	84	.....	400
9	368	320	256	250	232	200	192	168	144	130	124	113	99	560
10	379	352	320	290	256	240	216	184	160	142	.....	.....	.....	768
11	480	400	368	320	304	264	224	216	.....	.....	.....	.....	.....	928
12	496	432	408	368	336	304	272	232	208	192	.....	.....	.....	1024
13	800	640	528	480	432	416	386	320	288	.....	.....	.....	.....	1472
14	1024	928	768	704	608	550	544	480	384	.....	.....	.....	.....	2048
15	1248	1024	983	.....	736	.....	640	576	.....	.....	.....	.....	.....	3392

BRASS JACKET RIVETS

Dimensions and Number to the Pound

Numbers	7	8	8	9	12	13
Length in inches	$\frac{1}{4}$	$\frac{5}{16}$	$\frac{1}{4}$	$\frac{1}{4}$	$\frac{1}{4}$	$\frac{3}{8}$
Number to pound	188	312	240	340	525	860

COPPER HOSE RIVETS AND BURS

Number to the Pound

No.	$\frac{5}{16}$ "	$\frac{3}{8}$ "	$\frac{7}{16}$ "	$\frac{1}{2}$ "	$\frac{5}{8}$ "	$\frac{3}{4}$ "	$\frac{7}{8}$ "	Burs
7	164	138	133	128	120	113	102	352
8	209	173	169	152	145	130	110	400

OVAL HEAD COPPER RIVETS

Lengths measured under the head

Number to the Pound

No.	$\frac{1}{4}$ "	$\frac{5}{16}$ "	$\frac{3}{8}$ "	$\frac{7}{16}$ "	$\frac{1}{2}$ "	$\frac{5}{8}$ "	$\frac{3}{4}$ "	$\frac{7}{8}$ "	1"	$1\frac{1}{8}$ "	$1\frac{1}{4}$ "	Burs
9	317	270	254	220	206	193	189	165	138	116	107	560
12	496	390	332	302	278	264	256	216	200	182	.....	1024

COPPER BRAZIERS' RIVETS

Lengths measured under the head

OVAL HEAD												
Numbers.....	00	0	1	2	3	4	5	6	7	8	9	10
Number to pound.....	160	148	66	49	37	28	23	19	13	8	6	5
Diameter of shank.....	$\frac{5}{32}$	$\frac{3}{16}$	$\frac{1}{4}$	$1\frac{1}{64}$	$\frac{9}{32}$	$\frac{5}{16}$	$2\frac{3}{64}$	$\frac{3}{8}$	$\frac{7}{16}$	$1\frac{1}{32}$	$\frac{5}{8}$	$2\frac{1}{32}$
Length in inches.....	$\frac{3}{16}$	$\frac{3}{8}$	$\frac{1}{2}$	$\frac{1}{2}$	$\frac{5}{8}$	$\frac{3}{4}$	$\frac{3}{4}$	$\frac{1}{2}$	$\frac{1}{2}$	$1\frac{1}{4}$	$1\frac{1}{4}$	$1\frac{1}{4}$
FLAT HEAD												
$\frac{1}{4}$ in. diameter of shank by.....	$\frac{1}{4}$	$\frac{3}{4}$	1	$1\frac{1}{4}$	$1\frac{1}{2}$ in. long							
Number to pound.....	50	48	36	32	30							
$\frac{5}{16}$ in. diameter of shank by.....	$\frac{1}{4}$	1	$1\frac{1}{4}$	$1\frac{1}{2}$ in. long								
Number to pound.....	26	24	21	17								
$\frac{3}{8}$ in. diameter of shank by.....	1	$1\frac{1}{4}$	$1\frac{3}{8}$	$1\frac{1}{2}$	2 in. long							
Number to pound.....	17	15	13	12	10							
$\frac{1}{2}$ in. diameter of shank by.....	1	$1\frac{1}{4}$	$1\frac{3}{8}$	$1\frac{1}{2}$	2 in. long							
Number to pound.....	9	8	7	6	5							

Length in Inches	Diameter of shank in inches and B. & S. Gauge							
	$\frac{3}{8}$ "	$\frac{5}{16}$ "	$\frac{1}{4}$ "	No. 5	No. 6	$\frac{5}{16}$ "	No. 7	No. 8
$\frac{1}{2}$	28	48	83	96	130	150	160	210
$\frac{3}{4}$	24	39	62	84	104	125	136	160
$\frac{7}{8}$	22	31	55	75	91	108	116	142
1	20	28	50	64	83	94	102	125
$1\frac{1}{4}$	18	26	43	52	68	80	88	110
$1\frac{1}{2}$	16	22	38	46	62	71	75	96
$1\frac{3}{4}$	14	20	33	42	54	64	67	83
2	13	18	29	37	48	56	60	72
$2\frac{1}{4}$	12	16	25	34	41	48	52	66
$2\frac{1}{2}$	11	15	23	32	37	44	47	57
$2\frac{3}{4}$	10	14	21	30	34	40	43	52
3	9	13	20	28	31	37	39	48
$3\frac{1}{4}$	9	12	19	27	29	35	37	46
$3\frac{1}{2}$	8	12	18	25	27	33	35	44
$3\frac{3}{4}$	7	11	17	23	26	32	34	43
4	7	10	16	22	25	31	33	41

These tables are theoretically correct, but variations must be expected in practice.

U.T.HUNGERFORD



BRASS & COPPER CO.

NUMBER OF NAILS AND TACKS TO THE POUND

COPPER REGULAR CUT NAILS			COPPER WIRE NAILS			COPPER WIRE ROOFING NAILS	
Size	Length in Inches	Approximate Number to the Pound	Size	Length and Gauge In. No.	Approximate Number to the Pound		
.....	$\frac{5}{8}$	907	.....	$\frac{5}{8}$ 16	1406	$\frac{7}{8}$ in., No. 12 gauge 303 to the pound	
.....	$\frac{3}{4}$	660	.....	$\frac{3}{4}$ 14	692	1 in., No. 12 gauge 270 " " "	
.....	$\frac{7}{8}$	566	.....	$\frac{7}{8}$ 14	602	$1\frac{1}{4}$ in., No. 11 gauge 196 " " "	
2d	1	466	2d	1 15	765	$1\frac{1}{2}$ in., No. 10 gauge 134 " " "	
3d	$1\frac{1}{4}$	285	3d	$1\frac{1}{4}$ 11	196	$1\frac{3}{4}$ in., No. 12 gauge 231 " " "	
4d	$1\frac{1}{2}$	200	3d	$1\frac{1}{4}$ 14	522	$1\frac{1}{2}$ in., No. 12 gauge 210 " " "	
5d	$1\frac{3}{4}$	165	4d	$1\frac{1}{2}$ 11	165		
6d	2	97	4d	$1\frac{1}{2}$ 13	274		
7d	$2\frac{1}{4}$	77	5d	$1\frac{3}{4}$ 12	216		
8d	$2\frac{1}{2}$	69	6d	2 10	102		
9d	$2\frac{3}{4}$	55	6d	2 12	170		
10d	3	44	7d	$2\frac{1}{4}$ 8	51		
12d	$3\frac{1}{4}$	47	7d	$2\frac{1}{4}$ 9	72		
16d	$3\frac{1}{2}$	38	7d	$2\frac{1}{4}$ 11	131		
18d	$3\frac{3}{4}$	26	8d	$2\frac{1}{2}$ 10	91		
20d	4	26	9d	$2\frac{3}{4}$ 10	73		
30d	$4\frac{1}{2}$	20	10d	3 9	63		
40d	5	17	12d	$3\frac{1}{4}$ 9	50		
50d	$5\frac{1}{2}$	13	16d	$3\frac{1}{2}$ 8	40		
60d	6	10	20d	4 6	26		
			30d	$4\frac{1}{2}$ 5	20		
			40d	5 4	15		
			50d	$5\frac{1}{2}$ 3	12		
			60d	6 2	8		

To determine the number of Brass Nails to the pound, add 5 per cent to the number of Copper Nails.

CUT COPPER ROOFING NAILS

$1\frac{1}{4}$ in., approx. 190 to the pound.
 $1\frac{1}{2}$ in., approx. 135 to the pound.

CUT YELLOW METAL ROOFING NAILS

$1\frac{1}{4}$ in., approx. 154 to the pound.
 $1\frac{1}{2}$ in., approx. 140 to the pound.

CUT COPPER TACKS

	FLAT HEAD	OVAL HEAD
$\frac{1}{4}$ "	6000,	5000 to the pound
$\frac{5}{16}$ "	4000,	3500 " " "
$\frac{3}{8}$ "	3000,	2700 " " "
$\frac{7}{16}$ "	1800,	1720 " " "
$\frac{1}{2}$ "	1570,	1500 " " "
$\frac{9}{16}$ "	1400,	1350 " " "
$\frac{5}{8}$ "	930,	900 " " "
$\frac{11}{16}$ "	900,	875 " " "
$\frac{3}{4}$ "	850,	825 " " "
$\frac{13}{16}$ "	750,	725 " " "
$\frac{7}{8}$ "	640,	600 " " "
$\frac{15}{16}$ "	600,	575 " " "
1"	525,	500 " " "
$1\frac{1}{8}$ "	450,	425 " " "
$1\frac{1}{4}$ "	350,	330 " " "
$1\frac{3}{8}$ "	300,	300 " " "
$1\frac{1}{2}$ "	240,	240 " " "

APPROXIMATE NUMBER OF BRASS ESCUTCHEON PINS TO THE POUND

Length measured under the head.

No.	$\frac{1}{4}$	$\frac{3}{8}$	$\frac{1}{2}$	$\frac{5}{8}$	$\frac{3}{4}$	$\frac{7}{8}$	1	$1\frac{1}{4}$	$1\frac{1}{2}$	$1\frac{3}{4}$	2
12	.....	720	650	460	416	400	336	272	212	192	170
13	.....	1,120	948	672	528	480	400	380	320	229	220
14	1,875	1,312	1,100	950	830	692	600	432	378	320	272
15	2,440	1,820	1,376	1,152	960	888	720	576	580	432	400
16	3,100	2,240	1,720	1,460	1,275	1,130	980	720	592	578	464
17	3,540	2,700	2,076	1,812	1,500	1,185	1,051	928	800	640	.....
18	4,972	3,175	2,550	2,450	2,200	1,740	1,520	1,216	960	.....	.....
19	7,303	5,140	4,130	3,565	2,900	.....	.....	.....	.....	.....	.....
20	9,932	8,419	6,374	5,500	4,155	.....	.....	.....	.....	.....	.....

U.T.HUNGERFORD



BRASS & COPPER CO.

DIAMETERS, CIRCUMFERENCES, AND AREAS OF CIRCLES.

AND CONTENTS IN GALLONS AT ONE FOOT IN DEPTH.

AREA IN FEET.

Diam.	Circumference in Inches	Area in Inches	Gallons	Diam.	Circumference in Inches	Area in Inches	Gallons
1 in.	3.1416	.7854	.04084	6 1/2	20.420	33.183	1.72552
1 1/8	3.5343	.9940	.05169	6 3/4	20.813	34.471	1.79249
1 1/4	3.9270	1.2271	.06380	7	21.205	35.784	1.86077
1 3/8	4.3197	1.4848	.07717	7 1/4	21.598	37.122	1.93034
1 1/2	4.7124	1.7671	.09188	7 1/2	21.991	38.484	2.00117
1 5/8	5.1051	2.0739	.10784	8	22.383	39.871	2.07329
1 3/4	5.4978	2.4052	.12506	8 1/4	22.776	41.282	2.14666
1 7/8	5.8905	2.7611	.14357	8 1/2	23.169	42.718	2.22134
2 in.	6.2832	3.1416	.16333	8 3/4	23.562	44.178	2.29726
2 1/8	6.6759	3.5465	.18439	9	23.954	45.663	2.37448
2 1/4	7.0686	3.9760	.20675	9 1/4	24.347	47.173	2.45299
2 3/8	7.4613	4.4302	.23036	9 1/2	24.740	48.707	2.53276
2 1/2	7.8540	4.9087	.25522	9 3/4	25.132	50.265	2.61378
2 5/8	8.2467	5.4119	.28142	10	25.515	51.848	2.69609
2 3/4	8.6394	5.9395	.30883	10 1/4	25.918	53.456	2.77971
2 7/8	9.0321	6.4918	.33753	10 1/2	26.310	55.088	2.86458
3 in.	9.4248	7.0686	.36754	10 3/4	26.703	56.745	2.95074
3 1/8	9.8175	7.6699	.39879	11	27.096	58.426	3.03815
3 1/4	10.210	8.2957	.43134	11 1/4	27.489	60.132	3.12686
3 3/8	10.602	8.9462	.46519	11 1/2	27.881	61.862	3.21682
3 1/2	10.995	9.6211	.50029	11 3/4	28.274	63.617	3.30408
3 5/8	11.388	10.320	.53664	12	28.667	65.396	3.40059
3 3/4	11.781	11.044	.57429	12 1/4	29.059	67.200	3.49440
3 7/8	12.173	11.793	.61324	12 1/2	29.452	69.029	3.58951
4 in.	12.566	12.566	.65343	12 3/4	29.845	70.882	3.68586
4 1/8	12.959	13.364	.69493	13	30.237	72.759	3.78347
4 1/4	13.351	14.186	.73767	13 1/4	30.630	74.662	3.88242
4 3/8	13.744	15.033	.78172	13 1/2	31.023	76.588	3.98258
4 1/2	14.137	15.904	.82701	13 3/4	31.416	78.540	4.08408
4 5/8	14.529	16.800	.87360	14	31.808	80.515	4.18678
4 3/4	14.922	17.720	.92144	14 1/4	32.201	82.516	4.29083
4 7/8	15.315	18.665	.97058	14 1/2	32.594	84.540	4.39608
5 in.	15.708	19.635	1.02102	14 3/4	32.986	86.590	4.50268
5 1/8	16.100	20.629	1.07271	15	33.379	88.664	4.61053
5 1/4	16.493	21.647	1.12564	15 1/4	33.772	90.762	4.71962
5 3/8	16.886	22.690	1.17988	15 1/2	34.164	92.885	4.82846
5 1/2	17.278	23.758	1.23542	15 3/4	34.557	95.033	4.94172
5 5/8	17.671	24.850	1.29220	16	34.950	97.205	5.05466
5 3/4	18.064	25.967	1.35028	16 1/4	35.343	99.402	5.16890
5 7/8	18.457	27.108	1.40962	16 1/2	35.735	101.623	5.28439
6 in.	18.849	28.274	1.47025	16 3/4	36.128	103.869	5.40119
6 1/8	19.242	29.464	1.53213	17	36.521	106.139	5.51923
6 1/4	19.635	30.679	1.59531	17 1/4	36.913	108.434	5.63857
6 3/8	20.027	31.919	1.65979	17 1/2	37.306	110.753	5.75916

Diam.	Circumference	Area in Feet	Gallons	Diam.	Circumference	Area in Feet	Gallons
Ft.	In.	Ft.	In.	Ft.	In.	Ft.	In.
1	3	1 1/8	.7854	5	8 14	7 7/8	17.1041
1	3	4 3/4	.9217	5	9 14	11	17.7205
1	2	3	1.0690	5	10 15	2 1/8	18.3476
1	3	3	1.2271	5	11 15	5 1/4	18.9858
1	4	2 1/8	1.3962	5	15	8 1/2	19.6350
1	5	4	1.5761	5	15	11 1/8	20.2947
1	6	4	1.7671	5	2 16	2 3/4	20.9656
1	7	4	1.9689	5	3 16	5 1/4	21.6475
1	8	5	2.1816	5	4 16	9	22.3400
1	9	5	2.4052	5	5 17	0 1/8	23.0437
1	10	5	2.6398	5	6 17	3 1/4	23.7583
1	11	6	2.8852	5	7 17	6 3/8	24.4835
2	6	3 3/8	3.1416	5	8 17	9 3/8	25.2199
2	1	6	3.4087	5	9 18	0 3/4	25.9672
2	2	6	3.6869	5	10 18	3 3/8	26.7251
2	3	7	3.9760	5	11 18	7 1/8	27.4943
2	4	7	4.2760	6	18	10 1/8	28.2744
2	5	7	4.5869	6	3 19	7 1/2	30.6796
2	6	7	4.9087	6	6 20	4 3/8	33.1831
2	7	8	5.2413	6	9 21	2 3/8	35.7847
2	8	8	5.5850	7	21	11 3/8	38.4846
2	9	8	5.9395	7	3 22	9 3/4	41.2825
2	10	8	6.3049	7	6 23	6 3/4	44.1787
2	11	9	6.6813	7	9 24	4 3/8	47.1730
3	9	5	7.0686	8	25	1 1/2	50.2656
3	1	9	7.4666	8	3 25	11	53.4562
3	2	9	7.8757	8	6 26	8 3/8	56.7451
3	3	10	8.2957	8	9 27	5 3/4	60.1321
3	4	10	8.7265	9	28	3 3/4	63.6174
3	5	10	9.1683	9	3 29	0 3/8	67.2007
3	6	10 1/2	9.6211	9	6 29	10 1/8	70.8823
3	7	11	10.0846	9	9 30	7 1/2	74.6620
3	8	11	10.5591	10	31	5	78.5400
3	9	11	11.0446	10	3 32	2 3/8	82.5160
3	10	12	11.5409	10	6 32	11 3/4	86.5903
3	11	12	12.0481	10	9 33	9 1/4	90.7627
4	12	6 3/4	12.5664	11	34	6 3/8	95.0334
4	1	12	13.0952	11	3 35	4 3/8	99.4021
4	2	13	13.6353	11	6 36	1 1/2	103.8691
4	3	13	14.1862	11	9 36	10 3/8	108.4342
4	4	13	14.7479	12	37	8 3/8	113.0976
4	5	13	15.3206	12	3 38	5 3/4	117.8590
4	6	14	15.9043	12	6 39	3 3/4	122.7187
4	7	14	16.4986	12	9 40	0 3/8	127.6765

RULES RELATIVE TO THE CIRCLE

To Find Circumference—

Multiply diameter by 3.1416 or divide diameter by 0.3183

To Find Diameter—

Multiply circumference by 0.3183 or divide circumference by 3.1416

To Find Radius—

Multiply circumference by 0.15915 or divide circumference by 6.28318

To Find the Area of a Circle—

Multiply circumference by one-quarter of the diameter.

To Find the Surface of a Sphere or Globe—

Multiply the diameter by the circumference.

U.T.HUNGERFORD



BRASS & COPPER CO.

COMPARISON OF WIRE GAUGES
Expressed in Decimals of an inch

Decimal Equivalents of
FRACTIONS OF AN INCH

Gauge No.	American or Brown & Sharpe	Birmingham or Stubbs	Wash. & Moen	Imperial S. W. G.	London or Old English	United States Standard	Gauge No.
0000000			.490	.500		.500	0000000
000000	.5800		.460	.464		.46875	000000
00000	.5165		.430	.432		.4375	00000
0000	.4600	.454	.3938	.400	.454	.40625	0000
000	.4096	.425	.3625	.372	.425	.375	000
00	.3648	.380	.3310	.348	.38	.34375	00
0	.3249	.340	.3065	.324	.34	.3125	0
1	.2893	.300	.2830	.300	.3	.28125	1
2	.2576	.284	.2625	.276	.284	.265625	2
3	.2294	.259	.2437	.252	.259	.25	3
4	.2043	.238	.2253	.232	.238	.234375	4
5	.1819	.220	.2070	.212	.22	.21875	5
6	.1620	.203	.1920	.192	.203	.203125	6
7	.1443	.180	.1770	.176	.18	.1875	7
8	.1285	.165	.1620	.160	.165	.171875	8
9	.1144	.148	.1483	.144	.148	.15625	9
10	.1019	.134	.1350	.128	.134	.140625	10
11	.09074	.120	.1205	.116	.12	.125	11
12	.08081	.109	.1055	.104	.109	.109375	12
13	.07196	.095	.0915	.092	.095	.09375	13
14	.06408	.083	.0800	.080	.083	.078125	14
15	.05707	.072	.0720	.072	.072	.0703125	15
16	.05082	.065	.0625	.064	.065	.0625	16
17	.04526	.058	.0540	.056	.058	.05625	17
18	.04030	.049	.0475	.048	.049	.05	18
19	.03589	.042	.0410	.040	.040	.04375	19
20	.03196	.035	.0348	.036	.035	.0375	20
21	.02846	.032	.03175	.032	.0315	.034375	21
22	.02535	.028	.0286	.028	.0295	.03125	22
23	.02257	.025	.0258	.024	.027	.028125	23
24	.02010	.022	.0230	.022	.025	.025	24
25	.01790	.020	.0204	.020	.023	.021875	25
26	.01594	.018	.0181	.018	.0205	.01875	26
27	.01420	.016	.0173	.0164	.0187	.0171875	27
28	.01264	.014	.0162	.0148	.0165	.015625	28
29	.01126	.013	.0150	.0136	.0155	.0140625	29
30	.01003	.012	.0140	.0124	.01372	.0125	30
31	.008928	.010	.0132	.0116	.0122	.0109375	31
32	.007950	.009	.0128	.0108	.0112	.01015625	32
33	.007080	.008	.0118	.0100	.0102	.009375	33
34	.006305	.007	.0104	.0092	.0095	.00859375	34
35	.005615	.005	.0095	.0084	.009	.0078125	35
36	.005000	.004	.0090	.0076	.0075	.00703125	36
37	.004453		.0085	.0068	.0065	.006640625	37
38	.003965		.008	.0060	.0057	.00625	38
39	.003531		.0075	.0052	.005		39
40	.003145		.007	.0048	.0045		40
41	.002800			.0044			41
42	.002494			.004			42
43	.002221			.0036			43
44	.001978			.0032			44
45	.001761			.0028			45
46	.001568			.0024			46
47	.001397			.002			47
48	.001244			.0016			48
49	.001018			.0012			49
50	.0009863			.001			50

	1	.015625
1	64	.03125
32	3	.046875
1	64	.0625
16	5	.078125
3	64	.09375
32	7	.109375
1	64	.125
8	9	.140625
5	64	.15625
32	11	.171875
3	64	.1875
16	13	.203125
7	64	.21875
32	15	.234375
1	64	.250
4	17	.265625
9	64	.28125
32	19	.296875
5	64	.3125
16	21	.328125
11	64	.34375
32	23	.359375
3	64	.375
8	25	.390625
13	64	.40625
32	27	.421875
7	64	.4375
16	29	.453125
15	64	.46875
32	31	.484375
1	64	.500
2	33	.515625
17	64	.53125
32	35	.546875
9	64	.5625
16	37	.578125
19	64	.59375
32	39	.609375
5	64	.625
8	41	.640625
21	64	.65625
32	43	.671875
11	64	.6875
16	45	.703125
23	64	.71875
32	47	.734375
3	64	.750
4	49	.765625
25	64	.78125
32	51	.796875
13	64	.8125
16	53	.828125
27	64	.84375
32	55	.859375
7	64	.875
8	57	.890625
29	64	.90625
32	59	.921875
15	64	.9375
16	61	.953125
31	64	.96875
32	63	.984375
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